

**SEARCH REQUEST FORM****Scientific and Technical Information Center**

Requester's Full Name: Sh J. Lee Examiner #: 76060 Date: 11-16-2006  
Art Unit: 1752 Phone Number 301 27333 Serial Number: 101686697  
Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER DISK E-MAIL  
(Rem.)

**If more than one search is submitted, please prioritize searches in order of need.**

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Plz. see Bib.

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for the composition  
containing a photoinitiator  
listed in cl. #9

**STAFF USE ONLY**

Searcher: Car

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Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: 11/21/06

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Searcher Prep & Review Time: \_\_\_\_\_

Clerical Prep Time: 20

Online Time: 460

**Type of Search**

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) ☒

Bibliographic ☒

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

Patent Family \_\_\_\_\_

Other \_\_\_\_\_

**Vendors and cost where applicable**

STN cu

Dialog \_\_\_\_\_

Questel/Orbit \_\_\_\_\_

Dr.Link \_\_\_\_\_

Lexis/Nexis \_\_\_\_\_

Sequence Systems \_\_\_\_\_

WWW/Internet \_\_\_\_\_

Other (specify) \_\_\_\_\_

=> fil reg

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STRUCTURE FILE UPDATES: 20 NOV 2006 HIGHEST RN 913686-03-0  
DICTIONARY FILE UPDATES: 20 NOV 2006 HIGHEST RN 913686-03-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

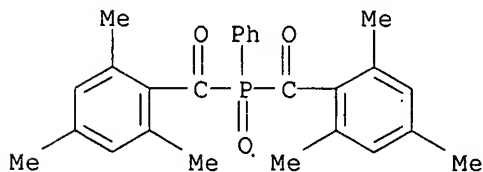
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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> d l102 ide can tot

L102 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN  
RN **162881-26-7** REGISTRY  
ED Entered STN: 11 May 1995  
CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide  
CN CGI 819XF  
CN Ciba 819  
CN I 819  
CN Irgacure 801  
CN Irgacure 819  
CN Irgacure I 819  
CN Phenylbis(2,4,6-trimethylbenzoyl)phosphine oxide  
DR 725253-72-5  
MF C26 H27 O3 P  
CI COM  
SR CA  
LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, PIRA,  
TOXCENTER, USPAT2, USPATFULL  
Other Sources: TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

672 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
675 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:446295  
REFERENCE 2: 145:446276  
REFERENCE 3: 145:442720  
REFERENCE 4: 145:438989  
REFERENCE 5: 145:430749  
REFERENCE 6: 145:425570  
REFERENCE 7: 145:420874  
REFERENCE 8: 145:420848  
REFERENCE 9: 145:420805  
REFERENCE 10: 145:420203

L102 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN

RN 119313-12-1 REGISTRY

ED Entered STN: 24 Feb 1989

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
(9CI) (CA INDEX NAME)

## OTHER NAMES:

CN  $\alpha$ -Benzyl- $\alpha$ -(dimethylamino)-4-morpholinobutyrophenone

CN 2-Benzyl-2-(dimethylamino)-1-(4-morpholinophenyl)-1-butanone

CN 2-Benzyl-2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-1-butanone

CN 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)butanone

CN 2-Benzyl-2-N,N-dimethylamino-1-(4-morpholinophenyl)-1-butanone

CN CGI 369

CN Ciba 369

CN IC 369

CN Irg 369

CN Irgacure 369

DR 748160-22-7, 136797-29-0

MF C23 H30 N2 O2

CI COM

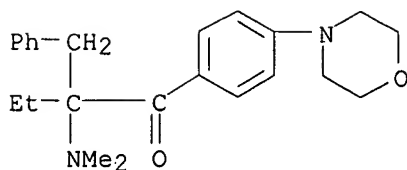
SR CA

LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM,  
MSDS-OHS, PIRA, RTECS\*, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

838 REFERENCES IN FILE CA (1907 TO DATE)  
 4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 840 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:446424  
 REFERENCE 2: 145:445996  
 REFERENCE 3: 145:440010  
 REFERENCE 4: 145:440001  
 REFERENCE 5: 145:429573  
 REFERENCE 6: 145:429531  
 REFERENCE 7: 145:420848  
 REFERENCE 8: 145:420713  
 REFERENCE 9: 145:386772  
 REFERENCE 10: 145:386704

=> fil hcaplus

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 FILE LAST UPDATED: 19 Nov 2006 (20061119/ED)

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jan delaval - 21 november 2006

substance identification.

=> d 1101 bib abs hitstr retable tot

L101 ANSWER 1 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:346660 HCAPLUS

DN 142:393235

TI Deformable curable soft molding compositions and hearing aid housing thereof

IN Litke, Alan Edward; Demarco, Joann; Kadziela, Victor Karol

PA Henkel Corporation, USA

SO U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of U.S. Ser. No. 81,564.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005084123	A1	20050421	US 2004-922458	20040820 <--
	US 6829362	B1	20041207	US 2002-81564	20020222 <--
PRAI	US 2002-81564	A2	20020222	<--	
	US 2004-585149P	P	20040702		

AB The invention relates to a curable composition and method for producing a tear resistant, yet soft and deformable in-the-ear product yielding the user greater comfort and durability. The curable composition incorporated into a hearing aid apparatus provides a deformable, yet tear resistant housing, which may be mated to a soft tip component. The hearing aid housing provides better comfort, durability and acoustic performance for a variety of ear canal shapes. The curable composition that provides these properties includes at least one urethane acrylate oligomer (e.g., Bomar BR 743G), at least one reactive diluent (e.g., 2-(2-ethoxyethoxy)ethyl acrylate and isobornyl acrylate) and a cure system. The composition when cured desirably produces a tear strength of at least about 75 pli and a hardness of about Shore A 60 to about 75.

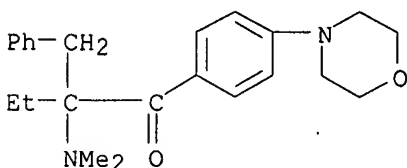
IT 119313-12-1, 2-Benzyl-2-N,  
N-dimethylamino-1-(4-  
morpholinophenyl)-1-butanone

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; deformable curable soft molding compns. for  
hearing aid housing)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
(9CI) (CA INDEX NAME)



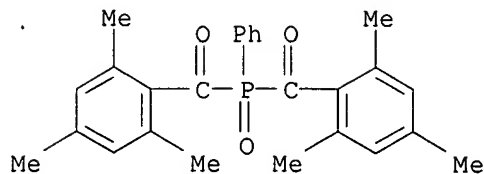
IT 162881-26-7, Bis(2,4,6-  
trimethyl benzoyl) phenyl phosphine  
oxide

RL: MOA (Modifier or additive use); USES (Uses)

(photoinitiator; deformable curable soft molding compns. for  
hearing aid housing)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 2 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:858388 HCAPLUS

DN 142:280837

TI **Photosensitive** resin composition for the spacer of liquid crystal display

IN Li, Junxian

PA Qimei Industry Co., Ltd., Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 18 pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1412234	A	20030423	CN 2001-136523	20011015 <--
PRAI	CN 2001-136523		20011015	<--	

AB The **photosensitive** resin composition is composed of unsatd. carboxylic acid monomer-epoxy-containing unsatd. monomer-other unsatd. monomer copolymer (5-50:10-70:0-70), vinyl-based compound, **photosensitive** initiator, and solvent. Thus, methacrylic acid 45, glycidyl methacrylate 37.5, tert-Bu methacrylate 37.5 and styrene 26 g were polymerized to give a polymer, 4.2 parts of which was polymerized with dipentaerythritol hexaacrylate in the presence of **photosensitizers**, to give a product showing good storage stability, heat resistance and solvent resistance.

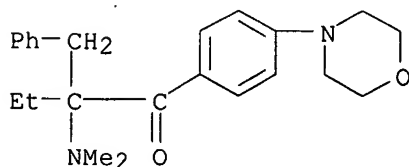
IT 119313-12-1, (2-Benzyl-2-N, N-dimethylamino-1-(4-morpholinophenyl)-1-butanone

RL: CAT (Catalyst use); USES (Uses)

(**photosensitive** resin composition for spacer of liquid crystal display)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 3 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:550767 HCAPLUS

DN 141:89905

TI Method of use and decomposition of **photodefinable** polymers  
 IN Kohl, Paul A.; Allen, Sueann Bidstrup; Wu,  
 Xiaoqun; Henderson, Clifford Lee  
 PA USA  
 SO U.S. Pat. Appl. Publ., 28 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

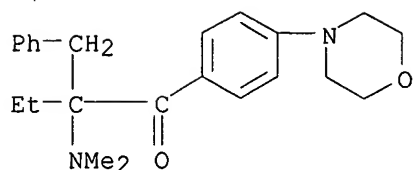
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004132855	A1	20040708	US 2003-686697	20031016 <--
	WO 2004036264	A2	20040429	WO 2003-US32918	20031016 <--
	WO 2004036264	A3	20040930		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,				
	GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,				
	LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,				
	OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,				
	TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
	KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				
	FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,				
	BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003301344	A1	20040504	AU 2003-301344	20031016 <--
	EP 1551906	A2	20050713	EP 2003-809104	20031016 <--
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006503335	T2	20060126	JP 2004-545424	20031016 <--
	CN 1729234	A	20060201	CN 2003-80103387	20031016 <--
PRAI	US 2002-418930P	P	20021016	<--	
	US 2003-686697	A	20031016	<--	
	WO 2003-US32918	W	20031016	<--	

*Pres.  
Invention*

AB One of the **photodefinable** polymers has a **sacrificial** polymer and a **photoinitiator**. Methods of for fabricating a structure are also provided. One exemplary method includes: disposing a **photodefinable** polymer onto a surface, wherein the **photodefinable** polymer includes a **sacrificial** polymer and a **photoinitiator** selected from a neg. tone **photoinitiator** and a pos. tone **photoinitiator**; disposing a gray scale photomask onto the **photodefinable** polymer, wherein the gray scale photomask encodes an optical d. profile defining a three-dimensional structure to be formed from the **photodefinable** polymer; exposing the **photodefinable** polymer through the gray scale photomask to optical energy; and removing portions of the **photodefinable** polymer to form the three-dimensional structure of crosslinked **photodefinable** polymer. In addition, methods of decomposing a polymer are also provided. One exemplary method includes: providing a structure having a substrate, an overcoat layer, and a polymer in a defined area within the overcoat layer; maintaining a constant rate of decomposition as a function of time; and removing the polymer from the area to form an air-region in the defined area.

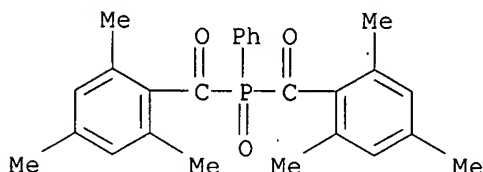
IT 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl) butanone 162881-26-7, Irgacure 819  
 RL: CAT (Catalyst use); USES (Uses)  
 (method of use and decomposition of **photodefinable** polymers)

RN 119313-12-1 HCAPLUS  
 CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 4 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:413166 HCAPLUS

DN 140:424425

TI **Sacrificial** compositions, uses, and methods of decompositionIN **Kohl, Paul A.; Allen, Sueann Bidstrup; Henderson, Clifford Lee; Jayachandran, Joseph Paul; Reed, Hollie; White, Celesta E.**

PA Georgia Tech Research Corporation, USA

SO PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004042797	A2	<u>20040521</u>	WO 2003-US34705	20031031 <--
	WO 2004042797	A3	<u>20050707</u>		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003291668	A1	<u>20040607</u>	AU 2003-291668	20031031 <--
	US 2004146803	A1	<u>20040729</u>	US 2003-699330	20031031 <--
	US 7052821	B2	<u>20060530</u>		
	EP 1567580	A2	<u>20050831</u>	EP 2003-768557	20031031 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1717437	A	20060104	CN 2003-80102854	20031031 <--
	JP 2006504853	T2	20060209	JP 2004-550350	20031031 <--
PRAI	US 2002-423013P	P	<u>20021101</u>	<--	
	US 2003-699330	A	20031031		

P.P.  
 ↓  
 T.D. filed  
 already

WO 2003-US34705 W 20031031

AB Exemplary polymer compns. includes a **sacrificial** polycarbonate such as polyethylene carbonate and a photoacid generator such as TAZ-101.

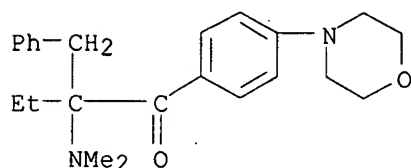
IT 119313-12-1 162881-26-7, Bis(2, 4,6-trimethylbenzoyl) phenylphosphineoxide

RL: CAT (Catalyst use); USES (Uses)

(**sacrificial** compns. for air-gap structures in microelectronic device fabrication)

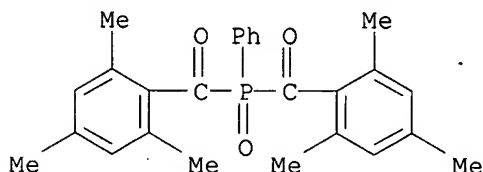
RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 5 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:310486 HCAPLUS

DN 140:322591

TI Visible- or UV/visible-light and anaerobically curable adhesive composition for encapsulating surface of primer mix disposed in primer cup

IN Attarwala, Shabbir; Belek, Ronald E.

PA Henkel Loctite Corporation, USA; Henkel Corporation

SO U.S. Pat. Appl. Publ., 6 pp., Cont.-in-part of U.S. 6,460,464.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004069175	A1	20040415	US 2003-429038	20030505 <--
	US 6883413	B2	20050426		
	US 6460464	B1	20021008	US 2000-612493	20000707 <--
PRAI	US 1999-144484P	P	19990719	<--	
	US 2000-612493	A2	20000707	<--	
	US 2002-380957P	P	20020516	<--	

AB The composition for encapsulating the surface of the primer mix disposed in the primer cup, particularly for use in center fire ammunition, comprises (a) a (meth)acrylate component; (b) an anaerobic component and (c) a **photoinitiator** component containing a visible light **photoinitiator** and optionally a UV/visible light

photoinitiator. Thus, a composition comprising polyethylene glycol dimethacrylate 79.7, trimethylolpropane trimethacrylate 14.0, anaerobic cure-inducing composition 4.8, Irgacure 819 1 and dye 5 parts was dispensed onto a anvil, wicked onto a primer mix in the primer cup., exposed to visible-light cured, anaerobically cured and hammered to give replicates showing detonated.

IT 119313-12-1, 2-Benzyl-2-N,

N-dimethylamino-1-(4-morpholinophenyl)-1-butanone

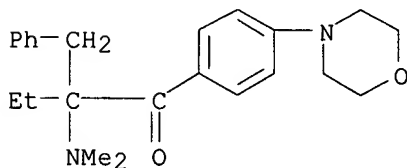
162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(visible- or UV/visible-light and anaerobically curable adhesive composition for encapsulating surface of primer mix disposed in primer cup)

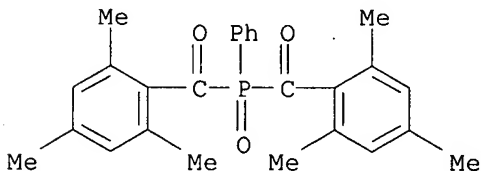
RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anon	1993			JP 5105847	
Attarwala	2000			US 6043327 A	HCAPLUS
Attarwala	2002			US 6460464 B1	HCAPLUS
Bachmann	1974			US 3794610 A	HCAPLUS
Bjerke	1990			US 4963201 A	HCAPLUS
Boerio, F	1990	6	721	Langmuir	HCAPLUS
Bouillet	1990			US 4942800 A	HCAPLUS
Brownstein	1969			US 3428614 A	
Conway	1985			US 4533446 A	HCAPLUS
Dunn	1989			US 4855002 A	HCAPLUS
Evans	1997			US 5639986 A	HCAPLUS
Gosciniak	1992			US 5081308 A	HCAPLUS
Jacobs	1932			US 1879278 A	
Klemarczyk	2000			US 6150479 A	HCAPLUS
Klemarczyk	2002			US 6342545 B1	HCAPLUS
Kriebel	1962			US 3046262 A	HCAPLUS
Kriebel	1965			US 3218305 A	HCAPLUS
Leppard	1996			US 5534559 A	HCAPLUS

Malofsky	1974		US 3855040 A	
Melody	1979		US 4180640 A	HCAPLUS
Narang	2000		US 6090453 A	HCAPLUS
Pitts	1983		US 4407856 A	HCAPLUS
Quinlan	1974		US 3847081 A	
Rich	1981		US 4287330 A	HCAPLUS
Rich	1982		US 4321349 A	HCAPLUS
Rutsch	1993		US 5218009 A	HCAPLUS
Snowwhite	2000		US 6136880 A	HCAPLUS
Somemiya	1998		US 5730828 A	HCAPLUS
Tanabe, T	1995	33  1691	Journal of Polym. Sci	HCAPLUS
Torres-Filho	1995	7  744	Chem. Mater.	HCAPLUS
Torres-Filho	1994	51  931	Journal of Appl. Pol	HCAPLUS
Wolinski	1978		US 4080238 A	HCAPLUS
Woods	2001		US 6231714 B1	
Woods	2002		US 6451948 B1	HCAPLUS

L101 ANSWER 6 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:19951 HCAPLUS

DN 140:60724

TI Separation of adhesive-bonded two-piece structures without breaking and adhesives used therefor

IN Fukui, Hiroshi; Kawabata, Kazuhiro

PA Sekisui Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004002549	A2	20040108	JP 2002-160029	20020531 <--
PRAI	JP 2002-160029		20020531 <--		

AB The structures are separated by heating until  $\tan\delta$  of cured products of adhesives reaches  $\leq 0.09$  before applying stress along the separation direction. Preferably, the adhesives comprise compds. bearing  $XnSiR3-n$  (X = hydrolytic group; R = hydrocarbyl; n = 1-3) and **photoinitiators** bearing  $COY(m)Zm-2CO$  (Y = O, N, P, C; Z = hydrocarbyl, oxide; Z = oxide only when m = 4 or 5; m = 2-5). Thus, an Al sheet was bonded with a glass plate via a cured product (viscoelasticity 0.084 at 200°) of a composition containing MS Polymer S 303 (polypropylene glycol alkoxyethyl ether),

Irgacure 819 (acylphosphine oxide), and Sibelite M 6000

(SiO<sub>2</sub>) to give a test piece, which was heated up to 200° and separated

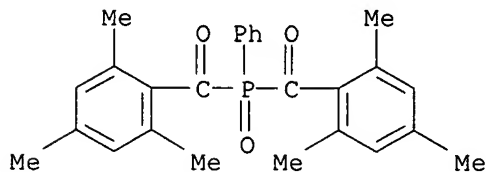
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator for photocurable adhesive; separation of photocurable-adhesive-bonded two-piece structures by heating)

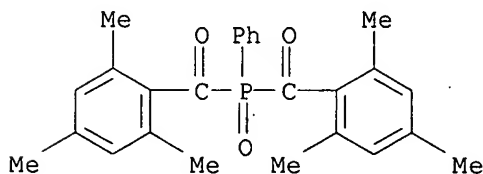
RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 7 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:5249 HCAPLUS  
 DN 140:60772  
 TI Photocurable adhesives suitable for medical and electronics applications  
 IN Wellmann, Stefanie  
 PA Wellomer GmbH, Germany  
 SO Eur. Pat. Appl., 8 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1376561	A1	20040102	EP 2002-13631	20020619 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI	EP 2002-13631		20020619	<--	
AB	A photocurable adhesive comprises (a) at least one urethane (meth)acrylate, (b) at least one N,N-dialkyl(meth)acrylamide, (c) at least one alkyl (meth)acrylate, (d) optionally, at least one hydroxyalkyl (meth)acrylate, and (e) at least one <b>photoinitiator</b> selected from acylphosphine oxides and acylphosphine oxide-containing mixts. The photocurable adhesive is suitable for applications in medicine and electronics. Thus, an adhesive composition comprising an urethane acrylate (22), isobornyl acrylate (50), N,N-dimethylacrylamide (20), hydroxypropyl methacrylate (4), and Lucirin TPO (2) and Irgacure 500 (2%) catalysts was prepared. A polycarbonate cannula and a needle made from refined steel were adhesively bonded to a strength of 100 N by UV irradiation of the composition for 0.2 s. In contrast, UV-IR curing resulted in the same strength only after 1 s of irradiation.				
IT	162881-26-7, Irgacure 819 RL: CAT (Catalyst use); USES (Uses) (photocurable adhesives suitable for medical and electronics applications)				
RN	162881-26-7 HCAPLUS				
CN	Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)				



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anon	1996	1996		PATENT ABSTRACTS OF	
Dainippon Ink And Chemi	2000			EP 1000993 A	HCAPLUS
Japan Synthetic Rubber	1995			JP 07310067 A	HCAPLUS
Loctite	2000			WO 0040663 A	HCAPLUS
Loctite	2002			WO 0249011 A	HCAPLUS
Sumitomo Chemical	1999			EP 0889465 A	HCAPLUS

L101 ANSWER 8 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:2922 HCAPLUS  
 DN 140:60509  
 TI Macromer-containing monomer mixtures and catalysts for macromer formation  
 IN Molock, Frank F.; Maiden, Annie C.; Lin, Xiaoping; Caison, Carrie L.;  
 Clark, Michael R.; Love, Robert  
 PA Johnson & Johnson Vision Care, Inc., USA  
 SO PCT Int. Appl., 53 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2004000888	A1	20031231	WO 2003-US19700	20030623 <--	
	W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW		
	RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	US 2004002556	A1	20040101	US 2002-183765	20020625 <--	
	US 6936641	B2	20050830			
	CA 2490808	AA	20031231	CA 2003-2490808	20030623 <--	
	AU 2003243724	A1	20040106	AU 2003-243724	20030623 <--	
	EP 1534759	A1	20050601	EP 2003-761246	20030623 <--	
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK		
	CN 1675252	A	20050928	CN 2003-819724	20030623 <--	
	JP 2005530896	T2	20051013	JP 2004-516119	20030623 <--	
	US 2006004119	A1	20060105	US 2005-181510	20050714 <--	
PRAI	US 2002-183765	A	20020625	<--		
	WO 2003-US19700	W	20030623			

AB A monomer mix composition comprises a macromer, wherein the macromer comprises a reaction product of an electrophilic compound and a macromer-precursor material in the presence of a macromer-forming catalyst; and a visible light **photoinitiator**, wherein the macromer-forming catalyst is compatible with the **photoinitiator**. The macromer mixture is useful for making ophthalmic lenses. The macromer-forming catalyst typically comprises triethylamine or bismuth.

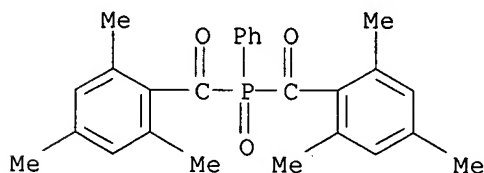
IT 162881-26-7

RL: CAT (Catalyst use); USES (Uses)

(**photoinitiator**; macromer-containing monomer mixts. and catalysts for macromer formation)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Johnson & Johnson Visio	2001			WO 0170824 A	HCAPLUS
Leppard, D	1996			US 5534559 A	HCAPLUS
Shinetsu Chemical Co	1998			EP 0849296 A	HCAPLUS
Zachar, Z	2002			US 2002107234 A1	HCAPLUS

L101 ANSWER 9 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2003:1007903 HCAPLUS  
 DN 140:43161  
 TI Low water content, high refractive index, flexible, polymeric compositions  
 IN Salamone, Joseph C.; Kunzler, Jay F.; Ozark, Richard M.; Seelye, David E.  
 PA Bausch & Lomb Incorporated, USA  
 SO U.S. Pat. Appl. Publ., 7 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003236375	A1	20031225	US 2002-175715	20020619 <--
	US 6852793	B2	20050208		
	CA 2490008	AA	20031231	CA 2003-2490008	20030611 <--
	WO 2004000901	A1	20031231	WO 2003-US18429	20030611 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,				
	HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,				
	LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,				
	RU, SD, SE, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,				
	ZA, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,				
	IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
AU	2003243507	A1	20040106	AU 2003-243507	20030611 <--
EP	1519968	A1	20050406	EP 2003-761053	20030611 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN	1662568	A	20050831	CN 2003-814469	20030611 <--
JP	2005530026	T2	20051006	JP 2004-515774	20030611 <--
PRAI	US 2002-175715	A	20020619	<--	
	WO 2003-US18429	W	20030611		

AB Optically transparent, relatively high refractive index polymeric compns. and ophthalmic devices such as intraocular lenses and corneal inlays made therefrom are described herein. The preferred polymeric compns. are produced through the polymerization of one or more copolymers with one or more hydrophilic monomers and optionally one or more aromatic-based monomers, hydrophobic monomers or a combination thereof. Thus, a film was cast using 65 parts phenylpropyl acrylate, 25 parts dimethylacrylamide, 10 parts methacryloyloxypropyl diphenylmethylsilane, 3 parts ethylene glycol dimethacrylate, and 0.5% Irgacure 819 photoinitiator. The film was cured by two-hour UV irradiation and then extracted in isopropanol for 24 h, air dried and then hydrated in a borate buffered saline. The resultant films possessed a modulus of 143 g/mm<sup>2</sup>, a tear strength of 57 g/mm and a water content of 5.7%.

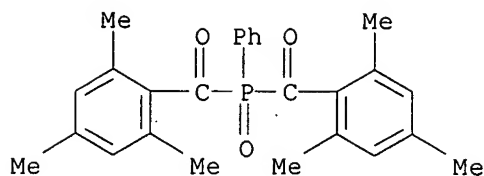
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; production of low water content, high refractive index, flexible, polymeric compns.)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anon	2001			WO 0181075 A2	
Fedorov	1987			US 4647282 A	HCAPLUS
Li	2002			US 6465588 B1	HCAPLUS
Makker	2001			US 6245106 B1	HCAPLUS
Martorano	1980			US 4190693 A	HCAPLUS
Niwa	2001			US 6277940 B1	HCAPLUS
Ojio	2001			US 6326448 B1	HCAPLUS
Polmanteer	1983			US 4418165 A	HCAPLUS
Reich	1989			US 4868251 A	HCAPLUS
Travnicek	1976			US 3996187 A	HCAPLUS
Travnicek	1976			US 3996189 A	HCAPLUS
Weinschenk	2003			US 6555030 B1	HCAPLUS
Yang	1996			US 5512609 A	HCAPLUS
Yang	1997			US 5623029 A	HCAPLUS

L101 ANSWER 10 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:671461 HCAPLUS

DN 139:215451

TI Light-shielding and yellow-resistant lens sheets with good adhesion and their manufacture

IN Nagasaki, Yoshinori; Oe, Yasushi

PA Toppan Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

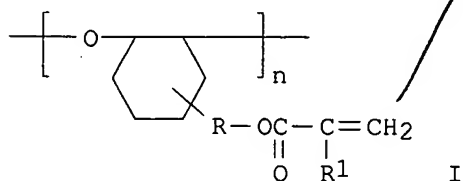
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003240915	A2	<del>20030827</del>	JP 2002-42742	20020220 <--
PRAI	JP 2002-42742		20020220	<--	
GI					



AB Title lens sheet comprises a base and a **photosensitive** resin composition layer on  $\geq 1$  side of the base, wherein the **photosensitive** composition contains (A) a binder polymer [e.g., BR 50

(polyacrylate)] obtained from an organic polymer, (B) a polyether compound I (R1 = H, methyl; R = C1-6 alkylene; n = 5-100; e.g., Cyclomer A 200 (3,4-epoxycyclohexylmethyl acrylate) homopolymer), (C) a polymerizable vinyl monomer (e.g., trimethylolpropane triacrylate) and (D) a **photoinitiator** (e.g., Irgacure 819).

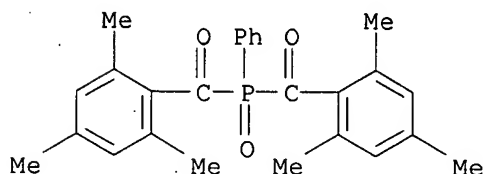
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(manufacture of light-shielding and yellow-resistant lens sheets with good adhesion)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 11 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:633375 HCAPLUS

DN 139:181104

TI Luminescing and/or fluorescing radiation-curable, cyanoacrylate-containing compositions, polymerizing compositions, and use

IN Wojciak, Stan

PA Henkel Loctite Corporation, USA

SO PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DT Patent

LA English

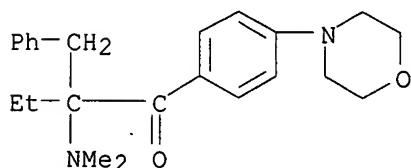
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003065841	A1	20030814	WO 2002-US34442	20021029 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
	AU 2002357674	A1	20030902	AU 2002-357674	20021029 <--
	US 2004034116	A1	20040219	US 2003-355037	20030131 <--
	US 7064155	B2	20060620		
PRAI	US 2002-353963P	P	20020205	<--	
	WO 2002-US34442	W	20021029	<--	

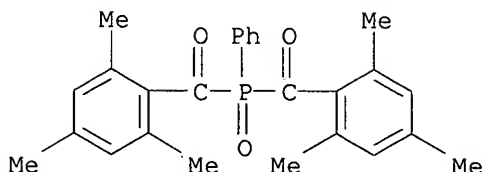
OS MARPAT 139:181104

AB A radiation-curable composition includes a cyanoacrylate component or a cyanoacrylate-containing formulation, a metallocene component, a hydrogen abstraction **photoinitiator**, and a luminescent and/or fluorescent dye. The dye has the ability to indicate a first color in the uncured state and a second color in the cured state. An adhesive composition contained .apprx.95.9 g Et 2-cyanoacrylate, .apprx.0.01 g ferrocene, .apprx.0.5 g Irgacure 819 photoinitiator, .apprx.3.5 g

polymethyl methacrylate, and a fluorescent dye such as fluoranthene.  
 IT 119313-12-1, 2-Benzyl-2-N,  
 N-dimethylamino-1-(4-  
 morpholinophenyl)-1-butanone  
 162881-26-7, Bis(2,4,6-  
 trimethylbenzoyl)phenylphosphine oxide  
 RL: CAT (Catalyst use); USES (Uses)  
 (luminescing and/or fluorescing radiation-curable, cyanoacrylate-containing  
 compns.)  
 RN 119313-12-1 HCAPLUS  
 CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
 (9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS  
 CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Devoe	1993			US 5182316 A	HCAPLUS
Field	1994			US 5203627 A	
Hekel	1996			US 5581978 A	
Hiraiwa	1989			US 4818325 A	HCAPLUS
Mickols	1992			US 5100802 A	HCAPLUS
Mikune	1998			US 5824180 A	
Nishiyama	2003			US 6503959 B1	HCAPLUS
Sung	1989			US 4885254 A	HCAPLUS
Wojciak	1999			US 5922783 A	HCAPLUS

L101 ANSWER 12 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:617870 HCAPLUS

DN 139:351424

TI Fabrication of Microchannels Using Polynorbornene **Photosensitive Sacrificial** Materials

AU Wu, Xiaogun; Reed, Hollie A.; Wang, Yong; Rhodes, Larry F.;  
 Elce, Ed; Ravikiran, R.; Shick, Robert A.; Henderson, Clifford L.  
 ; Bidstrup Allen, Sue Ann; Kohl, Paul A.

CS School of Chemical Engineering, Georgia Institute of Technology, Atlanta,  
 GA, 30332-0100, USA

SO Journal of the Electrochemical Society (2003), 150(9), H205-H213  
 CODEN: JESOAN; ISSN: 0013-4651

PB Electrochemical Society

DT Journal

LA English

AB A processing method was demonstrated for the fabrication of silica and polyimide microchannels using **photosensitive** polynorbornene copolymer based **sacrificial** materials. The channel geometric patterns of **sacrificial** polymer were made via photolithog. The **sacrificial** polymer patterns were encapsulated with a dielec. medium and then thermally decomposed to form air channels. For the thermal decomposition of **sacrificial** polymer, the heating program was determined on the basis of the kinetic model obtained from thermogravimetric anal. to maintain the decomposition at a constant rate. A properly selected heating program can avoid the deformation in the channel structure; at the same conditions, a large-size channel is more easily deformed than a small one. The tapered-structure microchannels were also produced using a gray-scale mask. A suitably low contrast for the **photosensitive sacrificial** material can lead to smooth and tapered microchannels.

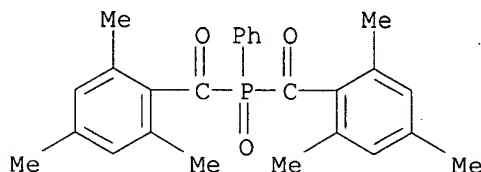
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(fabrication of silica and polyimide microchannels using polynorbornene **photosensitive sacrificial** materials)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bhusari, D	2001	10	400	J Microelectromech S	HCAPLUS
Dolnik, V	2000	21	41	Electrophoresis	HCAPLUS
Koch, M	2000			Microfluidic Technol	
McDonald, J	2000	21	27	Electrophoresis	HCAPLUS
Pethig, P	1998	8	356	J Micromech Microeng	
Raley, N	1997	3224	185	Proc SPIE	
Raley, N	1998	2639	40	Proc SPIE	
Wu, X				J Appl Polym Sci, In	
Wu, X	2002	149	G555	J Electrochem Soc	HCAPLUS

L101 ANSWER 13 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:481755 HCAPLUS

DN 139:53972

TI Manufacture of fiber-reinforced plastic molded products

IN Yoshii, Takayasu; Murata, Fumio; Yamamoto, Kiyoshi; Tsukamoto, Masahiro

PA Sekisui Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

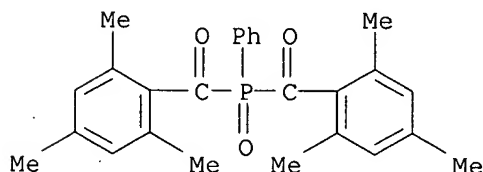
jan delaval - 21 november 2006

PI JP 2003175550 A2 20030624 JP 2002-273614 20020919 <--  
 WO 2004026564 A1 20040401 WO 2003-JP3638 20030325 <--  
 W: CN, KR  
 CN 1681641 A 20051012 CN 2003-822388 20030325 <--  
 PRAI JP 2001-285392 A 20010919 <--  
 JP 2001-285393 A 20010919 <--  
 JP 2002-273614 A 20020919 <--  
 JP 2003-40307 A 20030218

AB The molded products, useful for pipes, are manufactured by winding and shaping into pipe shapes of circumferential fiber reinforcements impregnated with polymerizable resin compns. containing **photoinitiators** and thermal polymerization initiators around a core rotating in the circumferential direction and curing the compns. by irradiation of light so as to initiate the polymerization reaction and that with the thermal polymerization initiators due to the heat of reaction. The polymerization reaction is completed in a short time without crack formation and the polymerizable resins can be reused. Thus, an unsatd. polyester containing Percure O (thermal polymerization initiator) and **Irgacure 819 (photoinitiator)**, loop roving (ECRRSE 1200), and parallel roving (ECRRSE 2400) were used in manufacture of a pipe showing sp. gr. 1.78, resin content 41%, bending strength 336.4 MPa in the circumferential direction and 106.7 in the axis direction, tensile strength 321.3 MPa, and flexural modulus 7.64 GPa.

IT 162881-26-7, **Irgacure 819**  
 RL: **CAT (Catalyst use)**; USES (Uses)  
 (photoinitiator; manufacture of fiber-reinforced plastic pipes without cracks)

RN 162881-26-7 HCAPLUS  
 CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 14 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2003:274878 HCAPLUS  
 DN 138:272794  
 TI **Photosensitive** double-sided adhesive tape and its production method

IN Sakai, Akiko; Nate, Kazuo  
 PA Sliiontec Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003105279	A2	20030409	JP 2001-299912	20010928 <--
PRAI	JP 2001-299912		20010928	<--	
AB	Title adhesive tape with good adhesion and the holding force at beginning is obtained by applying <b>photosensitive</b> adhesive composition, which is				

composed of acrylic adhesive polymer with Mw of 200,000-1,500,000 containing **photosensitive** functional group 0.1-1.0 mm equivalent /g, thermal curing agent, and photopolymer. initiator, on both sides of substrate, which is transparent for UV light, such as non-halogen elastic polymeric film, followed by drying and curing. Thus, adhesive composition, which was composed of 2-ethylhexyl acrylate, polyisocyanate crosslinking agent (L 45), and photopolymer. initiator (Irgacure 651), was coated on both sides of polyethylene/polypropylene/polyethylene laminated substrate to receive two-sided adhesive tape, which was cured under UVB exposure.

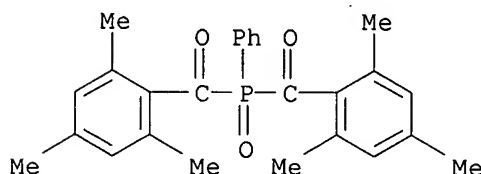
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(preparation of **photosensitive** double-sided adhesive tape)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 15 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:187603 HCAPLUS

DN 138:376279

TI **Photoinitiation** systems and thermal decomposition of **photodefinable sacrificial** materials

AU Wu, Xiaogun; Reed, Hollie A.; Rhodes, Larry F.; Elce, Ed; Ravikiran, R.; Shick, Robert A.; Henderson, Clifford L.; Bidstrup Allen, Sue Ann; Kohl, Paul A.

CS Georgia Institute of Technology, School of Chemical Engineering, Atlanta, GA, 30332-0100, USA

SO Journal of Applied Polymer Science (2003), 88(5), 1186-1195

CODEN: JAPNAB; ISSN: 0021-8995

PB John Wiley & Sons, Inc.

DT Journal

LA English

AB The exposure characteristics of photoimaging thermally decomposing **sacrificial** materials for fabrication of microfluidic devices are studied. The photoimaging materials contained a norbornene derivative copolymer and a **photoinitiator**. The results show that the **bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide photoinitiator** provided high **photosensitivity** and an adjustable contrast factor. The kinetics of the thermal decomposition of the polymers have been investigated with dynamic and isothermal thermogravimetric anal. to determine the most appropriate conditions for the thermal decomposition of the **sacrificial** polymers. The reaction is slightly higher than first-order, and a single mechanism can account for the decomposition throughout the process. The dependence of the kinetic parameters on the composition of the copolymers has been studied, and the reaction order remains unchanged; however, the activation energy is lower when the alkenyl-substituted norbornene content is increased in the copolymers.

IT 119313-12-1, Irgacure 369

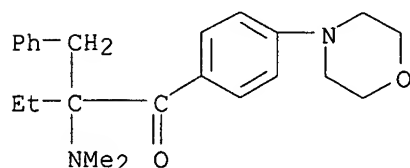
RL: CAT (Catalyst use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(Irgacure 369, photoinitiator;

characteristics of photoimaging thermally decomposing **sacrificial** materials containing norbornene derivative copolymer and **photoinitiator** for fabrication of microfluidic devices)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



IT 162881-26-7, Irgacure 819

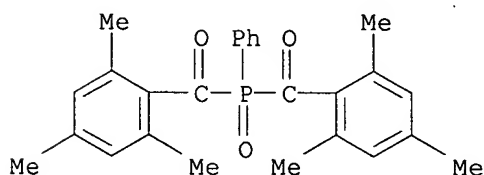
RL: CAT (Catalyst use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(Irgacure 819, photoinitiator;

characteristics of photoimaging thermally decomposing **sacrificial** materials containing norbornene derivative copolymer and **photoinitiator** for fabrication of microfluidic devices)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Baxter, J	1988	189	2769	Makromol Chem	HCAPLUS
Bhusari, D	2001	10	400	IEEE J Microelectrom	HCAPLUS
Bockhorn, H	1999	50	77	J Anal Appl Pyrolysi	HCAPLUS
Bockhorn, H	1996	116	129	J Combust Sci Techno	
Decker, C	1990	191	963	Makromol Chem	HCAPLUS
Decker, C	2001	42	17551	Polymer	HCAPLUS
Decker, C	1996	21	593	Prog Polym Sci	HCAPLUS
Fouassier, J	1993	1	49	Radiation Curing in	HCAPLUS
Goodall, B	1995			US 5468819	HCAPLUS
Goodall, B	1998			US 5705503	HCAPLUS
Goodall, C	1990			Modern Methods of Da	
Gravensen, P	1993	3	168	J Micromech Microeng	
Mastrangelo, C	1998	86	1769	Proc IEEE	HCAPLUS
McDonald, J	2000	21	27	Electrophoresis	HCAPLUS
Meindl, J	2002	46	245	IBM Res J	
Moukheiber, Z	1998	161	76	Forbes	
Nguyen, N	2002			Fundamentals and App	
Ozawa, T	1965	38	1881	Bull Chem Soc Jpn	HCAPLUS
Pethig, P	1998	8	356	J Micromech Microeng	
Raley, N	1997	3224	185	Proc SPIE	
Raley, N	1998	2639	40	Proc SPIE	

Rhodes, L	2001		US 6294616	HCAPLUS
Rutsch, W	1996  27	227	Prog Org Coat	HCAPLUS
Service, R	1998  282	396	Science	HCAPLUS
Srinivasan, R	1996	15	Proc Solid State Sen	
Van Krevelen, D	1990		Properties of Polyme	
Wedlake, M	2000		Master's Thesis, Geol	
Wu, X	2002  149	6555	J Electrochem Soc	

L101 ANSWER 16 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:68617 HCAPLUS

DN 138:123580

TI UV-curable molding materials, weather-resistant UV-curable molding materials, curing process thereof, and molded products therefrom

IN Hasebe, Akihisa; Mieno, Satoshi; Shimizu, Takao

PA Shin-Etsu Polymer Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003026715	A2	<del>20030129</del>	JP 2002-135265	20020510 <--
PRAI	JP 2001-142168	A	20010511	<--	

AB The UV-curable molding materials, useful for push button switches of portable telephones, etc., comprise (A) 100 parts photopolymerizable oligomers, (B) 0.1-900 parts photopolymerizable monomers, (Ca) 0.01-30 parts first **photoinitiators** having absorption at 220-360 nm and molar absorption coefficient  $\geq 50$ , and (Cb) 0.001-10 parts second **photoinitiators** having absorption at 340-500 nm and molar absorption coefficient  $\geq 100$  and show liquid viscosity 50-30,000 mPa-s at 23° and thixotropic index 0.5-2. The weather-resistant UV-curable molding materials contain (D) light stabilizers, (E) UV absorbers having absorption maximum at  $\leq 350$  nm, (F) antioxidants, and (G) antistatic agents in addition to the above molding materials in the total amount of 0.05-30 parts per 100 parts (A) and show liquid viscosity 50-100,000 mPa-s at 23° and thixotropic index 0.5-3. The molding materials are poured into molds made of thermoplastic resin sheets and cured by irradiation of UV. The molded products from the former materials have Tg -20 to +120°, bending strength 10-300 N/mm<sup>2</sup>, flexural modulus 90-7000 N/mm<sup>2</sup>, and Shore-D hardness 50-95, vs. -30 to +110, 10-290, 90-5000, and 40-80, resp., for molded products from the latter materials. Thus, Epoxy Ester 3002M (bisphenol A-type epoxy acrylate) 100, Light Ester 1,6HX (1,6-hexanediol dimethacrylate) 60, Light Ester TMP (trimethylolpropane trimethacrylate) 40, Darocur 1173 10, and **Irgacure 369** 0.01 part were blended to give a molding material showing viscosity 70 mPa-s and thixotropic index 1.10, then it was poured into a key-top shaped mold made of Panlite sheet PC 2151 (polycarbonate) and irradiated with UV to give a product showing Tg 115°, bending strength 280 N/mm<sup>2</sup>, flexural modulus 6800 N/mm<sup>2</sup>, tensile modulus 6300 N/mm<sup>2</sup>, elongation 4%, Shore D hardness 93, pencil hardness 5H, and good thermal shock, water, and yellowing resistance.

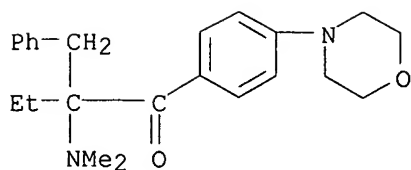
IT 119313-12-1, **Irgacure 369** 162881-26-7, **Irgacure 819**

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; UV-curable molding materials for push button switches with good heat, water, and yellowing resistance)

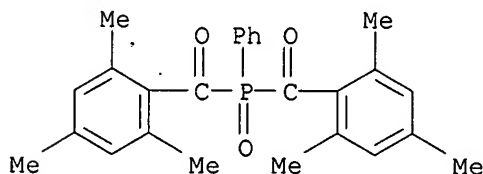
RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 17 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:14378 HCAPLUS

DN 138:56891

TI Low-temperature-curable unsaturated polyester compositions for fiber-reinforced plastic products

IN Suzuki, Yasuhiro; Ogoshi, Koji

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003002932	A2	20030108	JP 2001-191373	20010625 <--
PRAI	JP 2001-191373		20010625 <--		

AB The compns., useful for bathrooms, construction materials, etc., contain (A) unsatd. polyesters comprising unsatd. polybasic acids and/or their anhydrides and polyols, (B) comonomers having polymerizable double bonds, and (C) photopolymn. initiators. Thus, a composition comprising maleic anhydride-phthalic anhydride-propylene glycol copolymer, styrene, and a **photoinitiator** (Irgacure 651) was mixed with a curing agent (Permek N), impregnated into a glass mat, and cured at 0° to give a test piece with Barcol hardness 25.

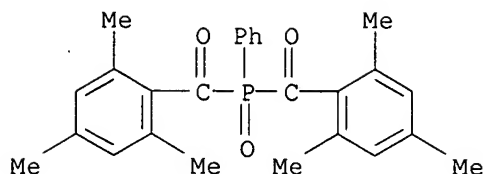
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(photopolymn. initiator; low-temperature-curable unsatd. polyester compns. for fiber-reinforced plastic products)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 18 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2002:814209 HCAPLUS  
 DN 137:326098  
 TI Photoreactive and photocurable compositions containing hydrolyzable  
 silicone compounds  
 IN Takahashi, Katsunori; Fukui, Hiroji; Kawabata, Kazuhiro; Kuroda, Takeo;  
 Ichitani, Motokuni; Nakatani, Yasuhiro  
 PA Sekisui Chemical Co., Ltd., Japan  
 SO PCT Int. Appl., 104 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002083764	A1	20021024	WO 2002-JP3520	20020409 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2003213001	A2	20030730	JP 2002-102854	20020404 <--
	CA 2443406	AA	20021024	CA 2002-2443406	20020409 <--
	EP 1391476	A1	20040225	EP 2002-714550	20020409 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	TW 591058	B	20040611	TW 2002-91107029	20020409 <--
	CN 1524104	A	20040825	CN 2002-807951	20020409 <--
	US 2004202956	A1	20041014	US 2004-474376	20040310 <--
PRAI	JP 2001-110138	A	20010409	<--	
	JP 2001-347708	A	20011113	<--	
	JP 2001-357853	A	20011122	<--	
	JP 2002-62421	A	20020307	<--	
	WO 2002-JP3520	W	20020409	<--	

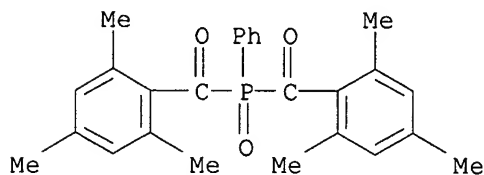
AB The compns. are useful for pattern formation, elec. conductive materials, elec. insulating materials, antireflective membranes, photoresists, color filters, adhesives, coatings, seals, gas barriers, etc., and contain a hydrolyzable metal compound (A), e.g., alkylalkoxysilane derivs., and a compound (B) capable of accelerating hydrolytic polycondensation and crosslinking of A in the presence of oxygen and under light irradiation. Thus, mixing 100 parts Kaneka MS-S 303 (methyltrimethoxysilyl-terminated polypropylene glycol) with 0.5 parts maleic anhydride, and mild-heating gave a title composition, which was exposed under high pressure Hg lamp to give a test sample.

IT 162881-26-7, Irgacure 819  
 RL: CAT (Catalyst use); USES (Uses)

(photosensitizer; photoreactive and photocurable compns.  
containing hydrolyzable silane compds.)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
General Electric Co	1990			JP 02-43215 A	HCAPLUS
General Electric Co	1990			EP 345575 A1	HCAPLUS
General Electric Co	1990			US 4966922 A	HCAPLUS
Jsr Corp	2000			JP 2000109560 A	HCAPLUS
Jsr Corp	2000			JP 2000109694 A	HCAPLUS
Jsr Corp	2000			JP 2000109695 A	HCAPLUS
Jsr Corp	2000			JP 2000144012 A	HCAPLUS
Jsr Corp	2000			JP 20001648 A	
Jsr Corp	2000			JP 2000167993 A	HCAPLUS
Jsr Corp	2000			JP 2000169755 A	HCAPLUS
Jsr Corp	2000			JP 2000171604 A	HCAPLUS
Jsr Corp	2000			JP 2000298352 A	HCAPLUS
Jsr Corp	2000			JP 2000327980 A	HCAPLUS
Jsr Corp	2000			JP 200066051 A	
Jsr Corp	2000			US 6207728 B1	HCAPLUS
Jsr Corp	2000			EP 965618 A1	HCAPLUS
Jsr Corp	2001			JP 2001288364 A	HCAPLUS
Jsr Corp	2001			JP 2001300951 A	HCAPLUS
Jsr Corp	2001			JP 200183342 A	
Jsr Corp	2001			JP 200183710 A	
Sekisui Chemical Co Ltd	2002			JP 200269387 A	

L101 ANSWER 19 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:768539 HCAPLUS

DN 137:280364

TI Radiochemical an anaerobically curable adhesive for sealing primer  
interface in ammunition cartridges

IN Attarwala, Shabbir

PA Henkel Loctite Corporation, USA

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

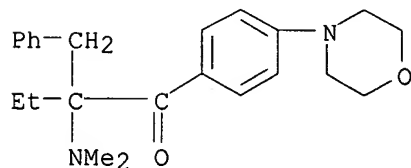
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6460464	B1	20021008	US 2000-612493	20000707 <--
	US 2004069175	A1	20040415	US 2003-429038	20030505 <--
	US 6883413	B2	20050426		
PRAI	US 1999-144484P	P	19990719	<--	
	US 2000-612493	A2	20000707	<--	
	US 2002-380957P	P	20020516	<--	

AB A radiochem. and anaerobically curable adhesive for sealing a primer cup and primer interface in a center fire ammunition cartridge consists of:  
 (1) a (meth)acrylate component, a portion of which includes a monofunctional (meth)acrylate, (2) an anaerobic cure-inducing component, (3) a **photoinitiator**, and (4)  $\leq 20$  weight% of a plasticizer.  
 The monofunctional (meth)acrylate, present at 10-25 weight% units of the total composition, is of general formula  $H_2C=C(G)-CO_2R$ , in which  $G = H$ , halogen, C1-4-alkyl;  $R = C1-16$ -alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkaryl, aralkyl, or aryl, and can be polyethylene glycol di(meth)acrylate, hydroxypropyl (meth)acrylate, hexanediol di(meth)acrylate, and isobornyl acrylate. The anaerobic cure-inducing composition includes saccharin, toluidines, acetyl phenylhydrazine, and maleic acid. Suitable **photoinitiators** are selected from 1-hydroxycyclohexyl Ph ketone, 2-methyl-1-[4-(methylthio)phenyl]-2-morpholino-1-(4-morpholinophenyl)-1-butanone, 2-benzyl-2-N,N-dimethylamino-1-(4-morpholinophenyl)-1-butanone, benzophenone, 2,2-dimethoxy-2-phenylacetophenone, bis(2,6-dimethoxybenzoyl-2,4,4-trimethylpentyl) phosphine oxide, 2-hydroxy-2-methyl-1-phenylpropan-1-one, and 2,4,6-trimethylbenzoyldiphenylphosphine oxide.

IT 119313-12-1, 2-Benzyl-2-N,N-dimethylamino-1-(4-morpholinophenyl)-1-butanone  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; radiochem. an anaerobically curable adhesive for sealing primer interface in ammunition cartridges)

RN 119313-12-1 HCAPLUS  
 CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anon	1993			JP 05105847	HCAPLUS
Brownstein	1969			US 3428614 A	
Conway	1985			US 4533446 A	HCAPLUS
Evans	1997			US 5639986 A	HCAPLUS
Jacobs	1932			US 1879278 A	
Kriebel	1962			US 3046262 A	HCAPLUS
Kriebel	1965			US 3218305 A	HCAPLUS
Malofsky	1974			US 3855040 A	
Narang	2000			US 6090453 A	HCAPLUS
Quinlan	1974			US 3847081 A	
Rich	1981			US 4287330 A	HCAPLUS
Wolinski	1978			US 4080238 A	HCAPLUS
Woods	2001			US 6231714 B1	

L101 ANSWER 20 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2002:736182 HCAPLUS  
 DN 137:248816

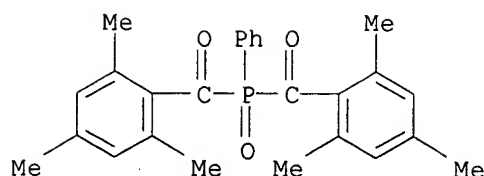
TI Manufacture of discrete particles and abrasive articles containing  
polymeric materials  
IN Larson, Eric G.; Kincaid, Don H.; Thurber, Ernest L.; Provow, Ronald D.  
PA 3M Innovative Properties Company, USA  
SO PCT Int. Appl., 78 pp.

CODEN: PIXXD2

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002074492	A2	20020926	WO 2002-US472	20020109 <--
	WO 2002074492	A3	20030925		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,				
	PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,				
	UA, UG, UZ, VN, YU, ZA, ZM, ZW				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
	KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,				
	GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,				
	GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2002170236	A1	20021121	US 2001-813368	20010320 <--
	US 6605128	B2	20030812		
	US 2003024170	A1	20030206	US 2001-813286	20010320 <--
	US 6582487	B2	20030624		
	AU 2002241826	A1	20021003	AU 2002-241826	20020109 <--
	EP 1372911	A2	20040102	EP 2002-707415	20020109 <--
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2002008035	A	20040302	BR 2002-8035	20020109 <--
	JP 2004533497	T2	20041104	JP 2002-573191	20020109 <--
PRAI	US 2001-813286	A	20010320	<--	
	US 2001-813368	A	20010320	<--	
	WO 2002-US472	W	20020109	<--	
AB	The discrete particles and abrasive articles comprise a plurality of abrasive grits and polymeric materials containing (a) an epoxy-functional material, (b) at least one of a cyclic anhydride or a diacid derived therefrom, and optionally (c) a polyfunctional (meth)acrylate as a curing agent. Thus, an abrasive belt was manufactured from composition comprising treated				
	aluminum oxide particles (grade P 120) 2625 g, ceramic aluminum oxide particles (Grade P 100 321) 875 g, Feldspar 1120 g, Irgacure 819 16 g, Disperbyk 111 5 g, Aerosil OX 50 70 g, trimethylol propane triacrylate 1570, Epon 825 275 g, 2:1 mixture of hexahydrophthalic anhydride and phthalic anhydride 115 g, and Sarcac CD 1010 10 g.				
IT	162881-26-7, Irgacure 819				
	RL: CAT (Catalyst use); USES (Uses)				
	(photoinitiator; manufacture of discrete particles and abrasive articles containing polymeric materials)				
RN	162881-26-7 HCAPLUS				
CN	Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)				



L101 ANSWER 21 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:142771 HCAPLUS

DN 136:185037

TI Process for producing cured photochromic objects

IN Komuro, Yasuko; Momoda, Junji

PA Tokuyama Corporation, Japan

SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002014387	A1	20020221	WO 2000-JP5407	20000811 <--
	W: AU, JP, SG, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 2000064754	A5	20020225	AU 2000-64754	20000811 <--
	EP 1312621	A1	20030521	EP 2000-951960	20000811 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	US 6864299	B1	20050308	US 2003-333775	20030124 <--
PRAI	WO 2000-JP5407	A	20000811	<--	

AB Disclosed is a process in which polymerization can be easily completed in a short

time to give a cured object having excellent photochromism such as eyeglass lens (no data). A photopolymerizable composition comprising (A) a radical-polymerizable monomer, (B) an UV-sensitive polymerization initiator which

has main absorption in the UV region and has a molar extinction coefficient of 150 L/(mol·cm) or higher for light having a wavelength of 400 nm, (C) a thermal-polymerization initiator, e.g., one having a 10-h half-life temperature

of 60° or higher, and (D) a photochromic compound is irradiated with actinic energy rays having as the main spectrum an emission spectrum having a wavelength of 400 nm or longer to conduct photopolymerization. preferably in such a manner that the composition being cured does not heat up to 50° or higher. Thereafter, the composition is further heated to conduct thermal polymerization. Thus, cast molding a mixture of 2,2-bis(methacryloyloxyethoxyphenyl)propane 38, 2,2-bis(methacryloyloxypentaethoxyphenyl)propane 38, glycidyl methacrylate 5, isobornyl acrylate 15, α-methylstyrene 3, α-methylstyrene dimer 1, N-cyanomethyl-6,7-dihydro-2-(p-methoxyphenyl)-4-methylspiro(5,6-benzo[b]thiophenedicarboxyimido-7,2-tricyclo[3.3.1.1.3,7])decane 0.01, tert-Bu peroxyisobutyrate 0.5 and Irgacure CGI-1700 (photoinitiator) 0.5 parts in a sealed glass mold, irradiating with a 120 W/cm metal halide lamp through a UV-cut filter having cutting rate for lights of 380-nm 99%, of 390-nm 98%, of 400-nm 50% and of 410-nm 15% for 2 min while maintaining at a temperature of 50°, then heating in an oven from 60° to 110° over 30 min and holding at 110°

for 2 h gave a molding with Rockwell hardness 96, no initial color and light distortion,  $\lambda_{\max}$  580 nm and excellent photochromism.

IT 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)

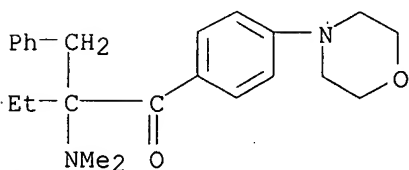
butanone 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; process for producing cured photochromic objects)

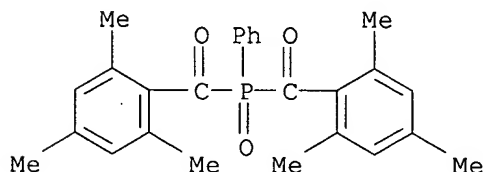
RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Nikon Corporation	1999			JP 11292909 A	HCAPLUS
Ppg Industries Ohio Inc	1999			US 5976422 A	HCAPLUS
Ppg Industries Ohio Inc	2000			WO 0034805 A2	HCAPLUS
Ppg Industries Ohio Inc	2000			AU 200021764 A	
Ppg Industries Ohio Inc	2000			US 6068797 A	
Showa Denko K K	1994			JP 656948 A	
Tokuyama Corp	1997			JP 09302336 A	HCAPLUS
Tokuyama Corporation	1996			JP 08319481 A	HCAPLUS
Tokuyama Corporation	1996			US 5910516 A	HCAPLUS
Tokuyama Corporation	1996			EP 773271 A1	HCAPLUS
Tokuyama Corporation	1996			WO 9637573 A1	HCAPLUS

L101 ANSWER 22 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:129284 HCAPLUS

DN 136:168721

TI Thermosetting pressure-sensitive adhesive material, self-adhesive tape and sheet, and manufacture of the tape and sheet

IN Masuda, Akiyoshi; Morimoto, Ayako; Sakai, Takahiro; Nate, Kazuo

PA Sliointec Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002053820	A2	20020219	JP 2000-242143	20000810 <--
PRAI	JP 2000-242143		20000810	<--	

AB The material contains a photocurable pressure-sensitive adhesive component based on an alkyl (meth)acrylate, a polar monomer, and an acrylic polymer substituted with **photosensitive** reactive functional group and thermosetting adhesive component based on an epoxy resin having m.p. 50-150° and average particle diameter (D) 1-100 µm and a cationic polymerization initiator. The pressure-sensitive adhesive tape or sheet has the

above material after photocuring. The tape and sheet are manufactured by the process involving applying of the material at thickness 5-500 µm on a substrate and irradiation for curing of the material. Thus, 2-ethylhexyl acrylate (I) 63, acrylic acid 7, **photosensitive** I polymer 30, a photopolymn. initiator (**Irgacure 819**) 0.3, powdered epoxy resin (Epikote 1001, D 5 µm, m.p. 60-68°) 20, and cationic polymerization catalyst (Sanaid SI 60L) 0.6 part were mixed to give the material,

which was applied on a polyester releasing film, laminated with another polyester releasing film, and UV-irradiated to give the thermosetting pressure-sensitive adhesive sheet. Then, the sheet was sandwiched between 2 stainless steel sheets and heated at 120° for 10 min to give a test piece showing shear adhesive strength 2 MPa.

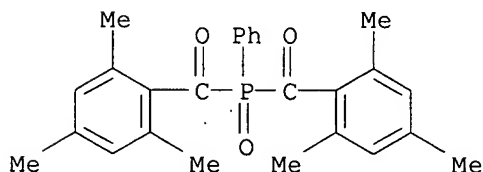
IT 162881-26-7, **Irgacure 819**

RL: CAT (Catalyst use); USES (Uses)

(photopolymn. initiator; in thermosetting pressure-sensitive adhesive material for tape and sheet containing photocurable acrylic resin component)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 23 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:63525 HCAPLUS

DN 136:119266

TI Visible light-curable epoxy resin unsaturated ester compositions

IN Ogoshi, Koji; Ubutame, Yutaka

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002020441	A2	20020123	JP 2000-201714	20000704 <--
PRAI	JP 2000-201714		20000704	<--	

AB The comps. contain (A) unsatd. esters manufactured from epoxy resins and unsatd. monobasic acids and optional polybasic acids and (B)

dicyclopentene substituted with H<sub>2</sub>C:CRCO<sub>2</sub>R<sub>1</sub>O (R = H, Me; R<sub>1</sub> = C<sub>2</sub>-12 alkylene, C<sub>4</sub>-12 oxyalkylene) group, and (C) visible light-sensitive **photoinitiators**. Thus, a composition containing 35 parts dicyclopentenylloxyethyl methacrylate, 65 parts reaction product of methacrylic acid with Epikote 828 and Epikote 1001, and 0.3 part Irgacure 784 [bis(η<sup>5</sup>-2,4-cyclopentadien-1-yl)-bis[2,6-difluoro-3-(1H-pyrrol-1-yl)phenyl]titanium] showed good curability.

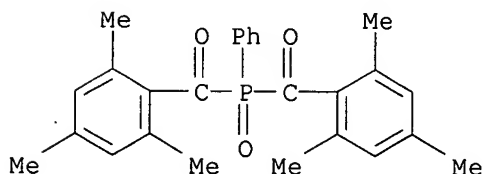
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(photoinitiators; visible light-curable epoxy resin unsatd. ester compns.)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 24 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:755637 HCAPLUS

DN 135:304907

TI Curable adhesives with good storage stability and temporary holding strength, and their manufacture and use in micro-electronic assembling adhesive tape sheets

IN Masuda, Akiyoshi; Morimoto, Ayako; Sakai, Takahiro; Nate, Kazuo

PA Sliontec Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001288418	A2	20011016	JP 2000-103125	20000405 <--
PRAI	JP 2000-103125		20000405	<--	

AB The adhesives comprise (A) a photochem. and thermally curable composition containing alkyl (meth)acrylate ester monomers, polar group-containing monomers,

photo-curable acrylic polymers having weight-average mol. weight (M<sub>w</sub>) 200,000-3,000,000 and photo-active functional group content 0.001-0.5 mequiv/g, and **photoinitiators**, and (B) a thermally curable composition containing epoxy resins and cationic polymerization catalysts.

Thus, mixing

2-ethylhexyl acrylate (I) 63 with acrylic acid 7, an acrylic polymer based mainly on I and having photo-active functional group content 0.01 mequiv/g, 30, 1,6-hexanediol diacrylate 0.05, **Irgacure 819 (photoinitiator)** 0.3, Epikote 834 (epoxy resin) 20 and Sanaid SI 60L (sulfonium salt) 0.6 parts, coating the resulting mixture on the surface of release-coated PET polyester film, covering with a similar film, and irradiating with UV light gave an adhesive tape sheet having the claimed properties.

IT 162881-26-7, Irgacure 819

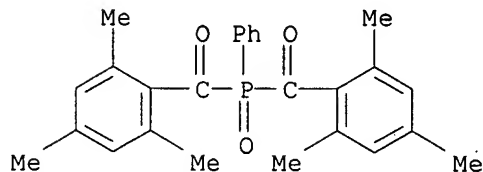
RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; curable adhesives with good storage

stability and temporary holding strength, and manufacture and use in micro-electronic assembling adhesive tape sheets)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 25 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:609862 HCAPLUS

DN 135:181418

TI Curable unsaturated ester resin compositions for cast moldings with good heat resistance, stretchability and toughness

IN Otani, Kazuo; Yamamoto, Tomio; Miura, Kenji; Sendai, Hidetake

PA Showa Highpolymer Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001226419	A2	20010821	JP 2000-111000	20000412 <--
PRAI	JP 1999-350029	A	19991209	<--	
OS	MARPAT 135:181418				

AB The compns. especially useful for artificial marble, electronic packaging, etc. (no data), are obtained from (A) unsatd. polyesters or/and vinyl ester resins, 100, (B) particulate fillers 0-300, and (C) **photoinitiators** comprising cationic colorants D<sup>+</sup>·A<sup>-</sup> (D<sup>+</sup> = visible light- or near-IR light-sensitive colorant cations; A<sup>-</sup> = anions) and Z<sup>+</sup>·B(R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>R<sub>4</sub>)- (Z<sup>+</sup> = cations; R<sub>1</sub>-4 = alkyl, other organic groups, etc.) 0.1-10 parts. Thus, cast molding a mixture of 100 parts Ripoxy R 806 (bisphenol A epoxy resin acrylate) and 2.5 parts Irgacure 1800 (**photoinitiator** mixture) in a glass mold and irradiating with a 600 W metal halide lamp (visible light) for 20 min gave a molding with flexural strength 140 MPa, flexural modulus 3.5 GPa, tensile strength 84 MPa, elongation 5.6 and 7.6% at maximum load and at break, resp., and T<sub>g</sub> 144°.

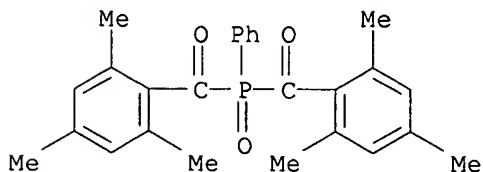
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(**photoinitiator**; curable unsatd. ester resin compns. for cast moldings with good heat resistance, stretchability and toughness)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 26 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:531105 HCAPLUS

DN 135:123514

TI Fireproofing hot-melt adhesives, and manufacture of their adhesive films and circuit boards using them

IN Saito, Kenji; Kumakura, Masayuki

PA Sony Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001200214	A2	20010724	JP 2000-10623	20000119 <--
PRAI	JP 2000-10623		20000119	<--	

AB The adhesives comprise base resins, fireproofing agents, photocurable resins, **photoinitiators** having maximum absorption spectrum (in the range of >310 nm) at <360 nm, and **photoinitiators** having maximum absorption spectrum (in the range of >360 nm) at <420 nm. Thus, an adhesive comprising a polyester (XA 0968), melamine-cyanuric acid compound (MC 610), melamine polyphosphate (MPP-A), calcium carbonate (Whiton SB), TiO<sub>2</sub> (R 820), an acrylic polyester (Aronix M 6200), benzil di-Me ketal (Irgacure 651), and bisacylphosphine oxide (**Irgacure 819**) was applied on a plastic film and UV-irradiated to give an adhesive film showing adhesion strength 18 N/cm at room temperature and elec. resistivity 9.7 + 1012 Ω.

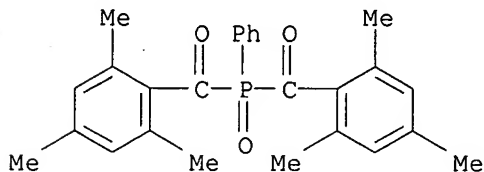
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; fireproofing hot-melt adhesives containing photocurable resins for circuit board insulating adhesive films)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 27 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:414613 HCAPLUS

DN 135:20666

TI Radiation-curable resin compositions for the manufacture of color liquid-crystal display devices

IN Nagatsuka, Tomio; Abe, Megumi

PA JSR Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

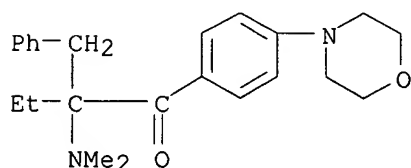
DT Patent

LA Japanese

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 2001154013 A2 20010608 JP 1999-341976 19991201 <--  
 SG 85221 A1 20011219 SG 2000-7088 20001129 <--  
 PRAI JP 1999-341976 A 19991201 <--  
 JP 2000-26031 A 20000203 <--  
 JP 2000-139829 A 20000512 <--  
 JP 2000-143900 A 20000516 <--  
 JP 2000-303192 A 20001003 <--  
 AB The compns. which can be developed with great precision and used as color filters on base boards powered by thin-film transistors with good adhesion to passivation film, comprise (A) colorants, (B) alkali-soluble resins, (C) polyfunctional monomers, and (D) **photoinitiators**. Thus, mixing 100 parts a 65:35 mixture of C.I. Pigment Red 177 (pigment) and C.I. Pigment Red 224 (pigment) with a benzyl methacrylate-glycerol monomethacrylate-N-phenylmaleimide-methacrylic acid-styrene copolymer 70, dipentaerythritol hexaacrylate 80, **2-benzyl-2-dimethylamino-1-(4-morpholinophenyl)butanone**-1 50 and propylene glycol monomethyl acetate 1000 parts gave a radiation-curable composition  
 IT 119313-12-1, 2-Benzyl-2-N, N-dimethylamino-1-(4-morpholinophenyl)-1-butanone  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiators; radiation-curable resin compns. for manufacture of color liquid-crystal display devices)  
 RN 119313-12-1 HCAPLUS  
 CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



L101 ANSWER 28 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:279471 HCAPLUS

DN 134:296679

TI Ultraviolet curable resin compositions having enhanced shadow cure properties

IN Gregory, Scott

PA Rheox, Inc., USA; Royal Adhesives and Sealants, LLC

SO Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1092740	A1	20010418	EP 2000-308981	20001012 <--
	EP 1092740	B1	20060823		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY				
	US 6245827	B1	20010612	US 1999-415079	19991012 <--
	CA 2312508	AA	20010412	CA 2000-2312508	20000627 <--
	AT 337352	E	20060915	AT 2000-308981	20001012 <--
PRAI	US 1999-415079	A	19991012	<--	

AB The sealing composition including an additive of  $\geq 1$  organic peroxide thermal initiators to cationic **photoinitiators**, that are sensitized with  $\alpha$ -hydroxyketones, which composition provides a self-propagating thermal curing reaction first activated by a short duration of surface UV radiation. The thermal reaction is non-directional, thus eliminating the line of sight limitation of current radiation curing processes. Complete curing can be achieved of the composition in a very short time; often after only a few minutes or less. The activation period can be provided by only a few seconds of UV light using a wide variety of com. UV light sources. Thus, a composition was made from a mixture of ERL 4221 57.8, Tone 0310 42.2, and CD 1012 1.0 part.

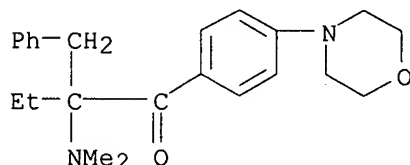
IT 119313-12-1 162881-26-7, Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide

RL: CAT (Catalyst use); USES (Uses)

(UV curable resin compns. having enhanced shadow cure properties)

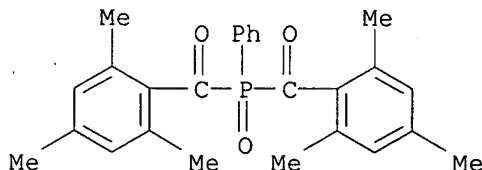
RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Biller, K	1998			US 5789039 A	HCAPLUS
Loctite Corp	1987			EP 0245559 A	HCAPLUS
Sumitomo Durez Co	1992			JP 04136020 A	HCAPLUS
Thera Ges Fuer Patente	1995			DE 4324322 A	HCAPLUS
Thera Ges Fuer Patente	1997			DE 19534594 A	HCAPLUS
Thera Ges Fuer Patente	1997			DE 19534668 A	HCAPLUS

L101 ANSWER 29 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:242806 HCAPLUS

DN 134:267394

TI **Photosensitive** resin composition for cylindrical spacers in fabrication of color filter for liquid crystal display

IN Minato, Koichi; Sakagawa, Makoto; Fukuhara, Kazuhiro

PA Toppan Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001091954	A2	20010406	JP 1999-266860	19990921 <--
	JP 3752916	B2	20060308		
PRAI	JP 1999-266860		19990921	<--	

AB Title **photosensitive** composition for cylindrical spacers with large upper/lower area ratio (S1/S2) and Young's modulus comprises resins, monomers, photopolymer. initiators, and solvents, wherein the monomers are presented by the formula: ACH<sub>2</sub>C(CH<sub>2</sub>A)2CH<sub>2</sub>OCH<sub>2</sub>C(CH<sub>2</sub>A)(Y)CH<sub>2</sub>A and ACH<sub>2</sub>C(CH<sub>2</sub>A)2CH<sub>2</sub>ZCH<sub>2</sub>C(CH<sub>2</sub>A)2CH<sub>2</sub>A, [A: CH<sub>2</sub>:CHCOO; Y: COOWCOOH; W: (CH<sub>2</sub>)<sub>n</sub>; Z: COONH(CH<sub>2</sub>)<sub>n</sub>NHCOO; n: 0-4]. Thus, spacers were prepared from a composition comprising styrene polymer PLA-118 17, two monomers (for n:2) each 4, acetophenone initiator **IRG-369** 2, and propylene glycol monomethyl ether acetate 73 wt%, showing S1/S2 84.6% and Young's modulus 1.7 + 105 N/cm<sup>2</sup>.

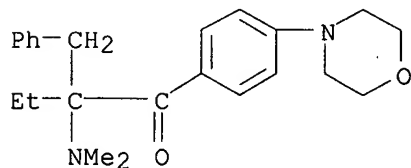
IT 119313-12-1, Irgacure 369

RL: CAT (Catalyst use); USES (Uses)

(photopolymer. initiator; preparation of **photosensitive** resin composition for cylindrical spacer in LCD color filter)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



L101 ANSWER 30 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:185851 HCAPLUS

DN 134:223509

TI Flame-retardant UV- and UV/moisture-curable silicone compositions

IN Bennington, Lester D.

PA Loctite Corporation, USA

SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001018121	A1	20010315	WO 2000-US24619	20000908 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

US 6323253 B1 20011127 US 1999-392527 19990909 <--  
 CA 2377109 AA 20010315 CA 2000-2377109 20000908 <--  
 EP 1210390 A1 20020605 EP 2000-960018 20000908 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL

JP 2003509527 T2 20030311 JP 2001-522337 20000908 <--  
 PRAI US 1999-392527 A 19990909 <--  
 US 1998-87449P P 19980601 <--  
 US 1999-119953P P 19990212 <--  
 WO 1999-US11837 A1 19990528 <--  
 WO 2000-US24619 W 20000908 <--

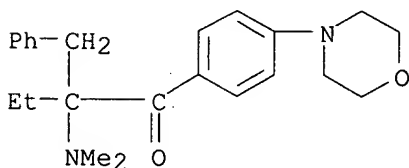
AB Silicone formulations, which are capable of being rapidly cured to tough elastomeric materials demonstrating high resistance to flammability and combustibility through exposure to UV radiation, and optionally through exposure to moisture as well, comprises (a) a reactive silicone resin component comprising are active polyorganosiloxane having at least one functional group selected from the group consisting of (meth)acrylate, carboxylate, maleate, cinnamate and combinations thereof, and optionally, an alkoxy or aryloxy functional group; (b) optionally, an inorg. filler component; (c) a **photoinitiator** component; and (d) a flame-retardant component in an amount effective to enhance the resistance of the composition to flammability.

IT 119313-12-1 162881-26-7, Bis(2, 4,6-trimethyl benzoyl)phenyl phosphine oxide

RL: CAT (Catalyst use); USES (Uses)  
 (flame-retardant UV- and UV/moisture-curable silicone compns.)

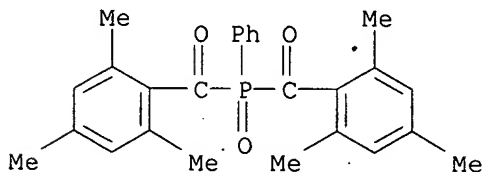
RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Chu	1993			US 5179134 A	HCAPLUS
Dai Nippon Printing Co	1973			GB 1323869 A	HCAPLUS
Field	1994			US 5302627 A	HCAPLUS
General Electric Compan	1981			GB 2066277 A	HCAPLUS

Lien	1985		US 4528081 A	HCAPLUS
Mine	1999		US 5872170 A	HCAPLUS
Sato	1981		US 4293397 A	HCAPLUS
Shin-Etsu Chemical Indu	1998		JP 1030068	

L101 ANSWER 31 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:101255 HCAPLUS

DN 134:164123

TI Manufacture of laminated structure and soldered and underfilled flip chip assembly

IN Oxman, Joel D.; Kropp, Michael A.; Hogerton, Peter B.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001009262	A1	20010208	WO 1999-US28245	19991130 <--
	W:			AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
	RW:			GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
	US 2002062919	A1	20020530	US 1999-365289	19990730 <--
	EP 1200533	A1	20020502	EP 1999-961861	19991130 <--
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL	
	JP 2003506860	T2	20030218	JP 2001-514057	19991130 <--
	US 2002066528	A1	20020606	US 2001-995038	20011126 <--
	US 6692611	B2	20040217		
	US 2004134604	A1	20040715	US 2003-744264	20031222 <--
PRAI	US 1999-365289	A	19990730	<--	
	WO 1999-US28245	W	19991130	<--	
	US 2001-995038	A3	20011126	<--	

AB A laminated structure comprises at least two layers and a photopolymerizable adhesive composition between the layers where at least one of the layers is opaque, colored, or reflective, transmissive to actinic radiation of wavelengths in the range of 400-1200 nm, and is essentially free of cellulosic and olefinic functionality. The photopolymerizable adhesive composition comprises a component being polymerizable in a hydrosilylation, cationic, or free radical polymerization process, with the proviso that the free radical polymerization process is free of dialkylaminobenzophenone sensitizer, and a **photoinitiator** that absorbs radiation in the identified spectral region of the radiation transmissive layer. Curing is effected by directing radiation in the identified spectral region through the radiation-transmissive layer and produces a laminated structure. An underfilled flip chip assembly on an integrated circuit board substrate can be prepared by the method described above. The polymerizable adhesive composition can be applied directly to one or both surfaces of an integrated chip and circuit board substrate or the chip aligned on an integrated circuit board substrate can be capillary underfilled with the adhesive composition which is subsequently cured.

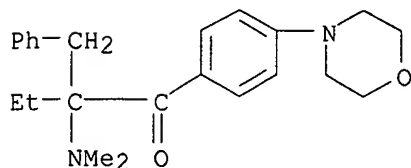
IT 119313-12-1, Irgacure 369

RL: CAT (Catalyst use); USES (Uses)

(manufacture of laminated structure and soldered and underfilled flip chip assembly)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Masuhara, E	1997			US 5607985 A	HCAPLUS
Minnesota Mining & Mfg	1991			EP 0449619 A	HCAPLUS
Oxman, J	1988			US 4735632 A	

L101 ANSWER 32 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:773576 HCAPLUS

DN 134:266869

TI Impact of **photoinitiators** on the light cure response of composites

AU Sitzmann, E. V.; Wostratzky, D. A.; Bramer, D. A.; Al-Akhdar, W.

CS Ciba Specialty Additives Division, Tarrytown, NY, USA

SO RadTech Report (2000), 14(5), 28-41

CODEN: RARPEH; ISSN: 1056-0793

PB RadTech International North America

DT Journal

LA English

AB The technol. of photocuring (or light curing) of fiber-reinforced plastic composites is experiencing strong growth as it is being applied to an ever increasing number of new com. applications. Critical to its success is the establishment of the light-cure response of the multilayered system. The authors have examined 10 **photoinitiator** and/or **photoinitiator** combinations, which were used to drive the photocure chemical of composites. The photoinduced free radical polymerization of

both unsatd. polyester/styrene and vinyl ester/styrene resins was examined

A good light cure response for all resins and composites was found when employing a **photoinitiator** package, which consisted of

**Ph bis(2,4,6-**

**trimethylbenzoyl)-phosphine oxide** and

1-hydroxycyclohexyl Ph ketone. The phys. properties (surface hardness, styrene content) correlate to the kinetics of the light-induced exotherm produced which, in turn, was related to the **photoinitiator** as well as to the type of lamp used.

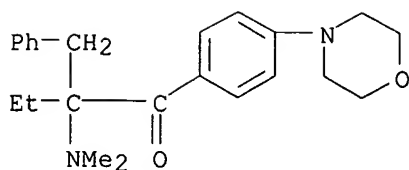
IT 119313-12-1, Irgacure 369 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(impact of **photoinitiators** on light cure response of composites)

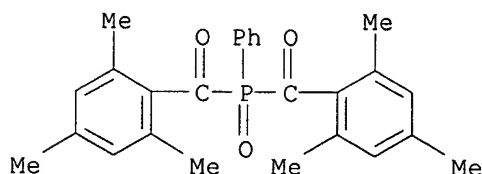
RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Baikerikar, K	1998		712	Radtech Conference P	HCAPLUS
Coons, L	1997	673	203	ACS Symposium Series	HCAPLUS
Coons, L	1996			PhD Dissertation, Mi	
Crivello, J	1997	64	2073	J Appl Polym Sci	HCAPLUS
Jung, T	1998	38	26	JOT, J Oberflaechent	HCAPLUS
Jung, T	1999		649	RadTech Europe 99, C	
Kennedy, K	1995	2	3045	Annu Tech Conf - Soc	
Koehler, M	1999		141	Composites '99 Confe	
Leppard, D	2000			US 6020528	HCAPLUS
Livesay, M	1999		163	Composites '99 Confe	
Narayanan, V	1997	11	25	RadTech Report	HCAPLUS
Narayanan, V	1998		31	Radtech Conference P	HCAPLUS
Scranton, A	1999			US 5855837	HCAPLUS
Shi, W	1994	51	1129	J Appl Polym Sci	HCAPLUS
Vigeant, F	2000		18	Radtech Report	

L101 ANSWER 33 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:772686 HCAPLUS

DN 133:336235

TI Photocurable composition for high refractive index lenses and their preparation

IN Toh, Huan Kiak; Chen, Fang

PA Sola International Holdings Ltd, Australia

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000064956	A1	20001102	WO 2000-AU349	20000420 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,

LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,  
 SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,  
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

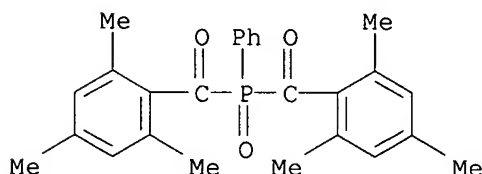
AU 2000039476 A5 20001110 AU 2000-39476 20000420 <--  
 PRAI AU 1999-9978 A 19990423 <--  
 WO 2000-AU349 W 20000420 <--

AB The photocurable composition a polythiol compound; an aromatic monomer having  $\geq 2$  vinyl groups; an acrylate monomer with  $\geq 2$  unsatd. groups containing (meth)acrylates, or (meth)acrylic acid anhydrides, and a **photoinitiator**. Thus, divinylbenzene 32.5, methacrylic anhydride 20.0, TGBMA 39.0, pentaerythritol tetrakis(2-mercaptoacetate) 8.5, Cyasorb UV 5411 0.2, Irganox 1010 0.2, Lucirin TPO (**photoinitiator**) 1.2 and Trigonox TX 29 (initiator) 0.5 parts was cast into a lens mold, UV-irradiated, cured at 100° for 1 h to give a lens having refractive index 1.599 and Abbe number 36.5.

IT 162881-26-7, Irgacure 819  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; photocurable composition for high refractive index lenses)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Mitsubishi Gas Chem Kk	1992			JP 04045401 A	HCAPLUS
Ppg Industries Ohio Inc	1999			AU 2455899 A	
Sola International Hold	1996			WO 9638486 A	HCAPLUS
Toray Ind Inc	1990			JP 02283731 A	HCAPLUS

L101 ANSWER 34 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:715624 HCAPLUS

DN 133:282758

TI UV-curable resin compositions for optical lenses and optical elements using them

IN Saito, Osamu; Hattori, Iwao; Hatano, Naomi

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

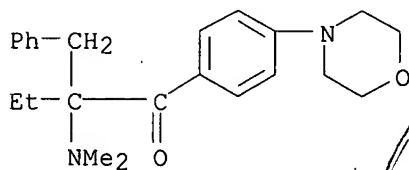
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000281725	A2	20001010	JP 1999-91518	19990331 <--
PRAI JP 1999-91518		19990331 <--		

AB The compns. contain (A) saturated ring-containing epoxy acrylates, and optionally

(B) epoxy acrylate-modified urethane acrylates (prepared from A, polyisocyanates, and OH-containing unsatd. compds.), (C) comonomers, and (D) polymerizable linear oligomers. Thus, an epoxy acrylate (prepared from hydrogenated bisphenol A epoxy resin and acrylic acid), isobornyl acrylate, and a **photoinitiator** were mixed and UV-cured on a glass substrate to give a lens, showing moisture absorption 1.3% and good moisture resistance.

IT 119313-12-1, 2-Benzyl-2-(dimethylamino)-1-(4-morpholinophenyl)-1-butanone  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; UV-curable resin compns. for optical lenses with good moisture resistance)  
 RN 119313-12-1 HCAPLUS  
 CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



L101 ANSWER 35 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:351567 HCAPLUS

DN 132:348471

TI Photocurable resin compositions with good sensitivity to visible light

IN Kakinuma, Keiko; Arima, Masao

PA Taiyo Ink Manufacturing Co., Ltd., Japan

SO PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000029453	A1	20000525	WO 1999-JP6423	19991117 <--
	W: KR, US				
	JP 2000154208	A2	20000606	JP 1998-328251	19981118 <--
PRAI	JP 1998-328251	A	19981118	<--	

AB The compns. comprise (A) an ethylenic compound, (B) a free-radical polymerization

initiator, and (C) a tertiary thiophosphite. The initiator (B) is (B-1) a free-radical photopolymn. initiator having absorption wavelengths not shorter than 400 nm, (B-2) a free-radical photopolymn. initiator having absorption wavelengths shorter than 400 nm, or a mixture of the initiators (B-1) and (B-2). The compns. are useful for a wide range of applications such as adhesives, coating materials, paints, molding materials, dental materials, and image-forming materials. Thus, a mixture of trimethylolpropane triacrylate 100, **Irgacure 369** (initiator) 2 and trilauryl trithiophosphite 0.7 parts had gel time of 42.8 s under visible light radiation.

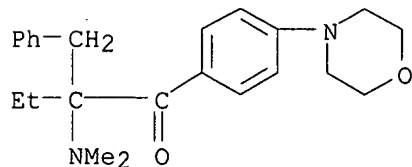
IT 119313-12-1, Irgacure 369 162881-26-7  
 , Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; photocurable resin compns. with good

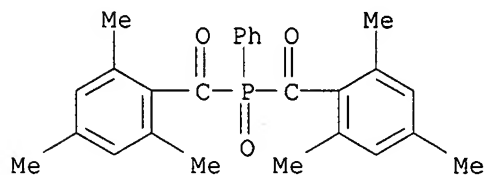
sensitivity to visible light)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
(9CI) (CA INDEX NAME)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Brother Kogyo Kabushiki				JP 10319584 A	HCAPLUS
Brother Kogyo Kabushiki	1998			EP 884650 A1	HCAPLUS
Mitsubishi Petrochemica	1995			JP 725919 A	
Pilot Corporation	1991			JP 03293670 A	HCAPLUS
Toray Industries Inc	1984			JP 59202458 A	HCAPLUS
Toray Industries Inc	1985			JP 6015428 A	
Toray Industries Inc	1993			JP 05255419 A	HCAPLUS

L101 ANSWER 36 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:181948 HCAPLUS

DN 132:294757

TI Photopolymerizable liquid encapsulants

AU Baikerikar, Kiran K.; Scranton, Alec B.

CS Department of Chemical Engineering, Michigan State University, East  
Lansing, MI, 48824, USA

SO Polymeric Materials Science and Engineering (2000), 82, 39-40

CODEN: PMSE DG; ISSN: 0743-0515

PB American Chemical Society

DT Journal

LA English

AB The viscosity, flexural strength and modulus, coefficient of thermal expansion,  
glass transition temperature, and initiation scheme are characterized for  
photopolymerizable liquid encapsulants containing 70-74.0 weight% fused silica

and

epoxy novolac-based vinyl ester resin, Derakane 470-45. The  
photoinitiator used was bis(2,4,  
6-trimethylbenzoyl)phenylphosphine  
oxide.

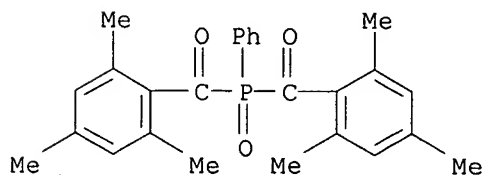
IT 162881-26-7, Irgacure 819

RL: CAT (Catalyst use); USES (Uses)

(epoxy resin-based fused silica-containing photopolymerizable liquid encapsulants for integrated circuits)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Manzione, L	1990			Plastic Packaging of	
Narayanan, V	1997	15	415	Trends in Polym Sci	HCAPLUS

L101 ANSWER 37 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:714999 HCAPLUS

DN 131:323648

TI Thermal stencil sheets and their manufacture by the use of UV-curable adhesives

IN Katsuno, Nobuhiro

PA Riso Kagaku Kogyo Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11309954	A2	19991109	JP 1998-121118	19980430 <--
PRAI	JP 1998-121118		19980430 <--		

AB UV-curable adhesives comprising 2-benzyl-2-dimethylamino-1-(4-morpholinophenyl)

butanone-1 (I) and UV-curable compds. are used for lamination of porous substrates with thermoplastic resin films and cured by irradiation of 1-450 nm light. Thus, an adhesive comprising bisphenol A glycidyl ether diacrylate oligomer 40, 2-hydroxy-3-phenoxypropyl acrylate 60, I 4, and 4-diethylaminoethyl benzoate 1 part was applied on a polyester film, covered with a Japanese paper-polyester fiber composite sheet, and irradiated with a metal halide lamp and then the film side was coated with a silicone releasing agent to give a stencil sheet showing little staining of a printer thermal head, good interlayer adhesion and water and solvent resistance, and no tack of the adhesive.

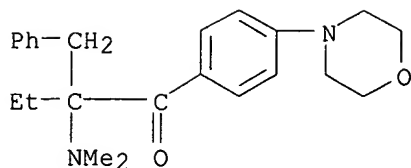
IT 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)butan-1-one

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; UV-curable adhesives for manufacture of thermal stencil sheets)

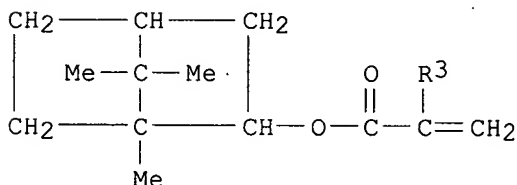
RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 38 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:610602 HCAPLUS  
 DN 131:244273  
 TI Polymerizable (meth)acrylate composition for optical lens uses  
 IN Nishitake, Toshihiro; Imura, Satoshi  
 PA Tokuyama Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

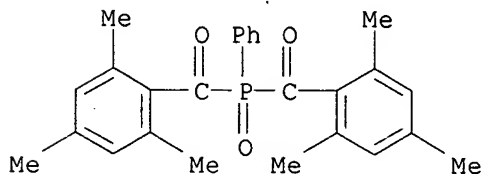
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11258552	A2	19990924	JP 1998-63018	19980313 <--
	JP 3681534	B2	20050810		
PRAI	JP 1998-63018		19980313	<--	
GI					



I

AB Title composition, which is light-weight, rapidly curable, and easy in use, consists of (A) 100 parts of monomers comprising (A1) two-functional (meth)acrylate monomer represented by the formula of  $H_2C:C(R_1)CO[OCH(R_2)CH_2]_aO-p-C_6H_4C(Me)_2-p-C_6H_4O[CH_2CH(R_2)O]_bCOC(R_1):CH_2$  ( $R_1, R_2: H, Me; a, b: \text{integer } 1-2; a + b = 2-3$ ) 100, (A2) single-functional (meth)acrylate monomer represented by the formula of I ( $R_3: H, Me$ ) 5-70, and (A3) propylene glycol di(meth)acrylate monomer represented by the formula of  $H_2C:C(R_4)COO[CH(Me)CH_2O]_c[CH_2CH(Me)O]_dCOC(R_4):CH_2$  ( $R_4: H, Me; c, d: \text{integer } 1-12; c + d = 3-15$ ) 10-100 parts, (B) 0.005-1 part of (di)acylphosphine oxide photoinitiators, and (C) 0.01-5 parts of thermal polymerization initiators (decomposition temperature  $70^\circ-90^\circ$ ), and is pre-polymerized by irradiation and heated to give the cured products. Thus, a 4:1 mixture of 2,2-bis(4-methacryloyloxyethoxyphenyl)propane and 2-(4-methacryloyloxyethoxyphenyl)-2-(4-methacryloylethoxyethoxyphenyl)propane 70, isobornyl methacrylate 10, poly(propylene glycol) dimethacrylate 20, bis(2,6-dimethoxybenzoyl)-2,4,4-trimethylpentylphosphine oxide 0.02, and tert-Bu peroxy-2-ethylhexanoate (Perbutyl IB) 0.5 part were blended, poured into a glass mold, irradiated with UV on both sides, and heated to  $110^\circ$  for 1 h to give a lens showing refractive index 1.549, sp. gr. 1.18, good impact and heat resistance, low optical strain and profile irregularity, and good dyeability.

IT 162881-26-7, Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; preparation of polymerizable (meth)acrylate composition for optical lens)  
 RN 162881-26-7 HCAPLUS  
 CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



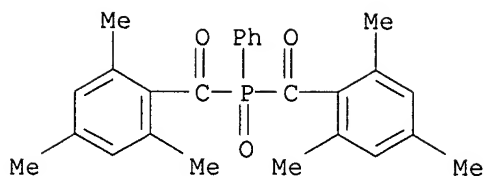
L101 ANSWER 39 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:556775 HCAPLUS  
 DN 131:185978  
 TI Rapidly curable acrylate-based polymer compositions for lightweight, heat- and impact-resistant, dyeable optical lenses and manufacture of the cured products  
 IN Nishitake, Toshihiro; Imura, Satoshi  
 PA Tokuyama K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11236420	A2	19990831	JP 1998-38461	19980220 <--
	JP 3547307	B2	20040728		
PRAI	JP 1998-38461		19980220 <--		

AB The compns. comprise (A) 100 parts monomers, which consist of H2C:CR1CO(OCHR2CH2)aO-p-C6H4CMe2-p-C6H4O(CH2CHR2O)bCOCR1:CH2 (R1, R2 = H, Me; a, b = 1-2; a + b = 2-3) 100, H2C:CR3CO(OCHR4CH2)cO-p-C6H4CMe2-p-C6H4O(CH2CHR4O)dCOCR3:CH2 (I; R3, R4 = H, Me; c, d = 1-11; c + d = 6-12) 5-200, and isobornyl (meth)acrylates 5-100 parts, (B) 0.005-1 parts photoinitiators, and (C) 0.01-5 parts thermal polymerization initiators and are pre-polymerized by irradiation of radiation and heated to give the cured

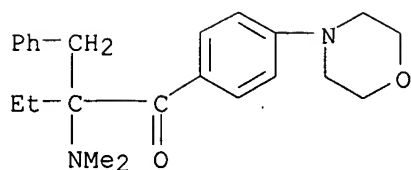
products. A 4:1 mixture of 2,2-bis(4-methacryloyloxyethoxyphenyl)propane and 2-(4-methacryloyloxyethoxyphenyl)-2-(4-methacryloyloxyethoxyethoxyphenyl)propane 45, I [R3 = Me; R4 = H; c + d = 6-14 (average = 10)] 45, isobornyl methacrylate 10, bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide 0.02, and tert-Bu peroxy-2-ethylhexanoate (Perbutyl IB) 0.5 part were blended, poured into a glass mold, irradiated with UV on both sides, and heated to 110° for 1 h to give a lens showing refractive index 1.551, sp. gr. 1.18, good impact and heat resistance, and good dyeability.

IT 162881-26-7, Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; rapidly curable acrylate-based polymer compns. for lightwt. optical lenses with good heat and impact resistance and dyeability)  
 RN 162881-26-7 HCAPLUS  
 CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 40 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:189006 HCAPLUS  
 DN 130:268243  
 TI Transparent resin composition  
 IN Takushima, Hidenori; Takeshita, Toshiichiro; Niki, Koji; Sakai, Yasuhiro  
 PA Asahi Optical Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11071458	A2	19990316	JP 1997-219482	19970814 <--
	US 6224976	B1	20010501	US 1997-910215	19970813 <--
	US 6465092	B1	20021015	US 2000-656455	20000906 <--
	US 6528160	B1	20030304	US 2000-656454	20000906 <--
	US 6531180	B1	20030311	US 2000-656456	20000906 <--
	US 6663957	B1	20031216	US 2000-656457	20000906 <--
PRAI	JP 1996-214748	A	19960814	<--	
	JP 1996-214749	A	19960814	<--	
	JP 1996-214753	A	19960814	<--	
	JP 1996-214754	A	19960814	<--	
	JP 1996-214756	A	19960814	<--	
	JP 1997-68283	A	19970321	<--	
	JP 1997-106405	A	19970423	<--	
	JP 1997-119149	A	19970509	<--	
	JP 1997-144020	A	19970602	<--	
	JP 1997-144021	A	19970602	<--	
	JP 1997-174403	A	19970630	<--	
	JP 1997-174404	A	19970630	<--	
	US 1997-910215	A3	19970813	<--	
AB	Resin useful in surface protective film, insulation membrane, and liquid crystal display protective film, etc., having good adhesion, stability, durability, impact resistance, especially transparency after curing, is a copolymer from pentaerythritol tetra(3-mercaptopropionate) with diallyl phthalate, diallyl isophthalate and/or diallyl terephthalate. Thus, diallyl phthalate 50.2 pentaerythritol tetra(3-mercaptopropionate) 49.8, <b>photoinitiator</b> 1-hydroxycyclohexylphenyl ketone 0.1 part were coated on a glass plate and photoirradiated to give a film, showing pencil hardness 2H and transmission for 400-750 nm light 98%.				
IT	<b>119313-12-1</b> , 2-Benzyl-2-dimethylamino-1-(morpholinophenyl)-butan-1-one				
	RL: <b>CAT (Catalyst use)</b> ; USES (Uses)				
	(photoinitiator; transparent resin composition)				
RN	119313-12-1 HCAPLUS				
CN	1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)				



L101 ANSWER 41 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:709130 HCAPLUS

DN 129:331507

TI Liquid radiation-curable resin compositions for use in optical fiber coatings

IN Snowwhite, Paul Eugene; Bishop, Timothy Edward; Szum, David Michael; Komiya, Zen; Ishikawa, Miyuki; Ukachi, Takashi

PA DSM N.V., Neth.; JSR Corporation

SO PCT Int. Appl., 82 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9847954	A1	19981029	WO 1998-NL220	19980421 <--
	W: AU, BR, CA, CN, JP, KR				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 10316887	A2	19981202	JP 1997-126629	19970516 <--
	JP 10316886	A2	19981202	JP 1997-145939	19970520 <--
	AU 9870847	A1	19981113	AU 1998-70847	19980421 <--
	JP 11049534	A2	19990223	JP 1998-126820	19980421 <--
	EP 975693	A1	20000202	EP 1998-917788	19980421 <--
	EP 975693	B1	20021218		
	EP 975693	B2	20060118		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 9808960	A	20000801	BR 1998-8960	19980421 <--
	JP 2002512585	T2	20020423	JP 1998-545516	19980421 <--
	US 6136880	A	20001024	US 1998-64173	19980422 <--
	US 6359025	B1	20020319	US 2000-514309	20000228 <--
PRAI	US 1997-43966P	P	19970422	<--	
	JP 1997-126629	A	19970516	<--	
	JP 1997-145939	A	19970520	<--	
	WO 1998-NL220	W	19980421	<--	
	US 1998-64173	A1	19980422	<--	

OS MARPAT 129:331507

AB The comps. comprise (A) 10-90% of  $\geq 1$  radiation-curable oligomer, (B) 10-90% of  $\geq 1$  radiation-curable monomer diluent, and (C) an effective amount of  $\geq 1$  bisbenzoylphosphine oxides  $\text{Ar}_2\text{C}(\text{O})\text{POAr}_1\text{C}(\text{O})\text{Ar}_3$  ( $\text{Ar}_1$ -3 are aromatic groups which may have one or more substitution groups) as **photoinitiators** for improving curability and removability after curing. Thus, a liquid acrylic urethane was prepared from the reaction of TDI, tricyclodecanedimethanol diacrylate, hydroxyethyl acrylate, tricyclodecanedimethanol, a copolymer of THF and 3-methyl-THF, N-vinyl-2-pyrrolidone and isobornyl acrylate and combined with **bis (2,4,6-trimethylbenzoyl) phenylphosphine oxide** to give a radiation-curable composition

IT 162881-26-7, Bis(2,4,6-

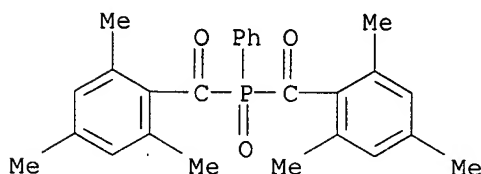
trimethylbenzoyl)phenylphosphine oxide

RL: CAT (Catalyst use); USES (Uses)

(photoinitiator; liquid radiation-curable resin compns. for use  
in optical fiber coatings)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Ciba-Geigy Ag	1994			EP 0615980 A	HCAPLUS
Ciba-Geigy Ag	1996			DE 19532358 A	HCAPLUS
Espe Pharm Praep	1986			EP 0184095 A	HCAPLUS

L101 ANSWER 42 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:608672 HCAPLUS

DN 129:217397

TI Radiation-curable, cyanoacrylate-containing compositions

IN Wojciak, Stan; Attarwala, Shabbir

PA Loctite Corp., USA

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

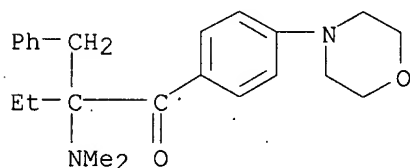
DT Patent

LA English

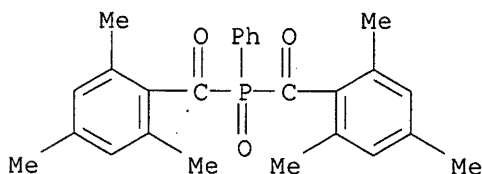
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9838260	A1	19980903	WO 1998-US3819	19980226 <--
	W: AU, BR, CA, CN, CZ, EE, HU, ID, JP, KR, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5922783	A	19990713	US 1997-805193	19970227 <--
	ZA 9801622	A	19980901	ZA 1998-1622	19980226 <--
	CA 2320114	AA	19980903	CA 1998-2320114	19980226 <--
	AU 9868634	A1	19980918	AU 1998-68634	19980226 <--
	AU 726757	B2	20001123		
	GB 2331101	A1	19990512	GB 1998-22838	19980226 <--
	GB 2331101	B2	20001129		
	DE 19880965	T	19990701	DE 1998-19880965	19980226 <--
	CH 689787	A	19991115	CH 1998-2139	19980226 <--
	EP 963420	A1	19991215	EP 1998-914231	19980226 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO				
	BR 9807804	A	20000328	BR 1998-7804	19980226 <--
	NZ 337905	A	20000623	NZ 1998-337905	19980226 <--
	DE 29824332	U1	20010222	DE 1998-29824332	19980226 <--
	RU 2207358	C2	20030627	RU 1999-120391	19980226 <--
	ES 2204202	A1	20040416	ES 1998-50017	19980226 <--
	ES 2204202	B1	20050616		
	AT 900198	A5	20051215	AT 1998-9001	19980226 <--

AT 414126 B 20060915  
 TW 458990 B 20011011 TW 1998-87102891 19980310 <--  
 FI 9802310 A 19981026 FI 1998-2310 19981026 <--  
 DK 9801384 A 19981222 DK 1998-1384 19981027 <--  
 SE 9803680 A 19981223 SE 1998-3680 19981027 <--  
 SE 511995 C2 20000110  
 NO 9904145 A 19991025 NO 1999-4145 19990826 <--  
 MX 9907982 A 20000630 MX 1999-7982 19990827 <--  
 US 6433036 B1 20020813 US 1999-486423 19991020 <--  
 US 6726795 B1 20040427 US 2002-78005 20020220 <--  
 US 6906112 B1 20050614 US 2002-94816 20020312 <--  
 PRAI US 1997-805193 A 19970227 <--  
 DE 1998-19880965 IA 19980226 <--  
 WO 1998-US3819 W 19980226 <--  
 US 1999-486423 A1 19991020 <--  
 OS MARPAT 129:217397  
 AB A radiation-curable composition includes a cyanoacrylate component or a cyanoacrylate-containing formulation (e.g., Et 2-cyanoacrylate); a metallocene component (e.g., ferrocene); and a **photoinitiator** (e.g., Darocur 1173) to accelerate the rate of cure.  
 IT **119313-12-1 162881-26-7, Irgacure 819**  
 RL: **CAT (Catalyst use); USES (Uses)**  
 (radiation-curable, cyanoacrylate-containing compns.)  
 RN 119313-12-1 HCAPLUS  
 CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



RN 162881-26-7 HCAPLUS  
 CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Coover, H	1990	27	463	HANDBOOK of ADHESIVE	
Gatechair	1987			US 4707432 A	HCAPLUS
Malofsky	1974			US 3855040 A	
National Starch And Che	1990			EP 0393407 A1	HCAPLUS

L101 ANSWER 43 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1998:461743 HCAPLUS  
 DN 129:217322

TI Relative reactivities of radical **photoinitiators** measured using fluorescence cure monitoring

AU Hu, Shengkui; Neckers, Douglas C.; Popielarz, Roman; Specht, Kathleen G.

CS Center for Photochemical Sciences, Bowling Green State University, Bowling Green, OH, USA

SO RadTech Report (1998), 12(3), 27-29  
CODEN: RARPEH; ISSN: 1056-0793

PB RadTech International North America

DT Journal

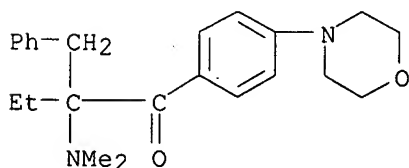
LA English

AB We describe a novel and widely applicable method for measuring the relative reactivities of radical **photoinitiators**. This method is based on monitoring the polymerization reaction of photocurable resin thin film using twisted intramol. charge transfer (TICT) fluorescence probes such as 5-dimethylaminonaphthalene-1-sulfonyl-n-butylamide (DASB). As the curing reaction proceeds, the fluorescence emission spectra of the TICT probe shifts hypsochromically because the increase in the matrix microviscosity makes it more difficult for the excited probe mol. to relax to its twisted charge transfer state. The changes in the fluorescence spectra were detected by a rapid scan fluorimeter and were expressed as the fluorescence intensity ratios at two wavelengths selected on each side of the maximum emission wavelength. When the intensity at a short wavelength is divided by the intensity at a longer wavelength, the resulting ratio increases monotonically with the polymerization progress. Real-time polymerization profiles were recorded by plotting the intensity ratios against irradiation times. Relative initiation efficiencies of different **photoinitiators** can be derived from these kinetic profiles. Several com. initiators (six from the Irgacure series and two from the Darocur series) and new phenylglyoxylate initiators (eight compds., including one com. product, Me phenylglyoxylate) were studied in triethylene glycol diacrylate monomer. Initiation efficiencies of the com. initiators differ sharply, e.g., **Irgacure 369** reacts about seven times more efficiently than Irgacure 907 in initiating polymerization. Most of the phenylglyoxylates react with modest efficiencies.

IT 119313-12-1, **Irgacure 369**  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts; relative reactivities of radical **photoinitiators** for poly(triethylene glycol diacrylate) measured fluorescence cure monitoring)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bradley, G	1996	100	109	Photochem Photobiol,	HCAPLUS
Hu, S				Macromolecules, subm	
Hu, S				To be published	

Neckers, D	1997		US 5606171	HCAPLUS
Paczkowski, J	1991  24	3013	Macromolecules	HCAPLUS
Popielarz, R	1996	271	Proceedings RadTech	

L101 ANSWER 44 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:613839 HCAPLUS

DN 127:235157

TI **Photosensitive** polymer films and their method of production

IN Lee, Chung J.; Trisnadi, Jahja I.

PA Tamarack Storage Devices, Inc., USA

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	US 5665791	A	19970909	US 1995-531521	19950921 <--
PRAI	US 1995-531521		19950921	<--	

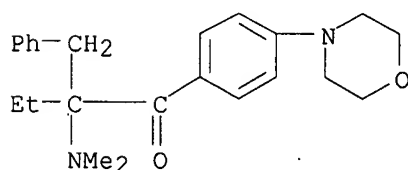
AB **Photosensitive** polymer films, useful for storing holog. images, are provided that include (1) a polymer carrier having :NC(:O) groups [such as poly(2-ethyl-2-oxazoline) and poly(vinylpyrrolidone)], (2) an initiation system for photopolymer., (3) polymerizable compds., and (4) other chems. as appropriate. The initiation system contains a dye such as that with absorption range 650-710 nm, and a **photosensitive** initiator such as PhCOC(OMe)2Ph and 4-RC6H4COCET(NMe2)(CH2Ph) (R = morpholino) containing an amino acid coiniciator. The **photosensitive** polymer films demonstrate short pump times, short DRAW times, short fix times, and reduced noise levels equal to one-third to one-fifth the noise level of prior **photosensitive** polymer films.

IT 119313-12-1

RL: **CAT (Catalyst use)**; USES (Uses)(photopolymer. catalyst; **photosensitive** polymer films for holog. image storage)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



L101 ANSWER 45 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:286 HCAPLUS

DN 126:32595

TI Ultraviolet-curable adhesive compositions for bonding substrates with low transparency

IN Tokuda, Kiyohisa; Ishii, Kazuhiko

PA Nippon Kayaku Kabushiki Kaisha, Japan

SO PCT Int. Appl., 22 pp.

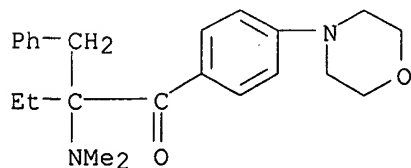
CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9634065	A1	19961031	WO 1996-JP1134	19960425 <--
	W: CN, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP	768353	A1	19970416	EP 1996-912241	19960425 <--
	R: CH, DE, FR, GB, LI, NL				
CN	1152330	A	19970618	CN 1996-190410	19960425 <--
CN	1076378	B	20011219		
JP	09031416	A2	19970204	JP 1996-129371	19960426 <--
JP	3775760	B2	20060517		
WO	9740115	A1	19971030	WO 1997-JP1445	19970424 <--
	W: CN, JP, KR, SG, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP	835917	A1	19980415	EP 1997-919689	19970424 <--
EP	835917	B1	20060830		
	R: CH, DE, ES, FR, GB, LI, NL				
CN	1195364	A	19981007	CN 1997-190701	19970424 <--
CN	1132889	B	20031231		
US	6284185	B1	20010904	US 2000-521547	20000309 <--
US	6294239	B1	20010925	US 2000-569668	20000512 <--
JP	2004099910	A2	20040402	JP 2003-386258	20031117 <--
PRAI	JP 1995-127407	A	19950428	<--	
	JP 1995-141429	A	19950517	<--	
	WO 1996-JP1134	W	19960425	<--	
	JP 1996-129371	A3	19960426	<--	
	JP 1996-179870	A	19960621	<--	
	US 1996-765016	A2	19961219	<--	
	WO 1997-JP1445	W	19970424	<--	
	US 1998-170320	B3	19981013	<--	
AB	The title compns. contain a photopolymn. initiator exhibiting a molar absorption coefficient of $\geq 400$ at a wavelength of 360-450 nm and a UV-curable compound This composition can bond substrates to each other, each substrate exhibiting a total transmittance of 0.01-20% for the energy rays of 280-380 nm wavelength. Thus, an adhesive composition comprised a bisphenol-based epoxy resin 20, a hydroxypivalic acid neopentyl glycol diacrylate 30, phenyloxyethyl acrylate 50, 2,4-diethylthioxanthone 5 and isoamyl p-dimethylaminobenzoate photopolymn. co-initiator 3 parts.				
IT	119313-12-1, Irgacure 369				
	RL: CAT (Catalyst use); USES (Uses)				
	(UV-curable adhesive compns. for bonding substrates with low transparency)				
RN	119313-12-1 HCAPLUS				
CN	1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)				



L101 ANSWER 46 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:541518 HCAPLUS

DN 123:201337

TI Photocurable resin compositions for electric and electronic device sealing

materials  
 IN Hibino, Satoru  
 PA Three Bond Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07033837	A2	19950203	JP 1993-199912	19930720 <--
	JP 3296033	B2	20020624		
PRAI	JP 1993-199912		19930720	<--	

OS MARPAT 123:201337

AB The compns. contain oligomers comprising butadiene-based resins having polymerizable ethylenically unsatd. double bonds at their terminals and/or side chains and containing ≥50% butadiene homopolymers containing ≥50% 1,4-butadienes or 100 parts resins containing 20-100% the butadiene-based resins and 0-80% resins comprising monomers containing ≥1 polymerizable ethylenically unsatd. double bond and 1-5 parts **photoinitiators**. Thus, 100 parts Poly bd R-45ACR-LC (polybutadiene-based resin) and 2 parts 1-hydroxycyclohexylphenyl ketone were mixed to obtain a photocurable resin composition, which was applied on a magnetic hard disk drive, and cured by UV radiation, the resulted sealing material showed good reliability and low volatiles.

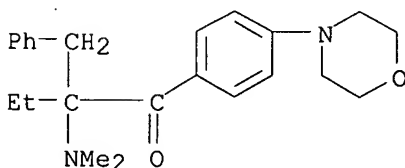
IT 119313-12-1

RL: CAT (Catalyst use); USES (Uses)

(photocurable resins compns. containing ethylenic polybutadienes, (meth)acrylic monomers, and **photoinitiators** for elec. device packaging)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



L101 ANSWER 47 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:526579 HCAPLUS

DN 122:267423

TI Thin film security device application process and adhesive therefor

IN Pincus, Alice Hibbert

PA Bank of Canada, Can.

SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2

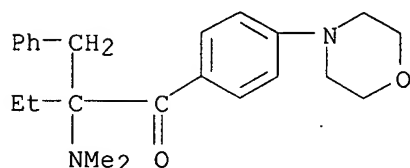
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9413749	A1	19940623	WO 1993-CA519	19931213 <--
	W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD,				

SE, SK, UA, VN  
 RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,  
 BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG  
 AU 9455580 A1 19940704 AU 1994-55580 19931213 <--  
 PRAI US 1992-990289 A 19921214 <--  
 WO 1993-CA519 W 19931213 <--  
 AB An UV-curable temporarily pressure-sensitive adhesive composition which when irradiated with UV light quickly attains a high tack state for transferring dielec. material thereto, and within hours permanently bonds to the dielec. material to form a thin film security device (TFSD). The adhesive comprises (a)  $\geq 1$  saturated copolyester having terminal acrylic double bonds and hydroxyl moieties; (b)  $\geq 1$  pigment dispersed in a liquid selected from an acrylic monomer, a vinyl ether monomer, oligomers thereof, and blends thereof; (c)  $\geq 1$  vinyl ether monomer, oligomers thereof, or blends of the vinyl ether monomer and oligomers; and (d)  $\geq 1$  **photoinitiator** in a quantity sufficient to render the composition tacky within about 1 s. after exposure to UV radiation.  
 IT 119313-12-1  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; thin film security device application process and adhesive therefor)  
 RN 119313-12-1 HCAPLUS  
 CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



L101 ANSWER 48 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1994:458854 HCAPLUS

DN 121:58854

TI Visible light-polymerizable compositions

IN Iketani, Hirotoshi

PA Tokyo Shibaura Electric Co, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

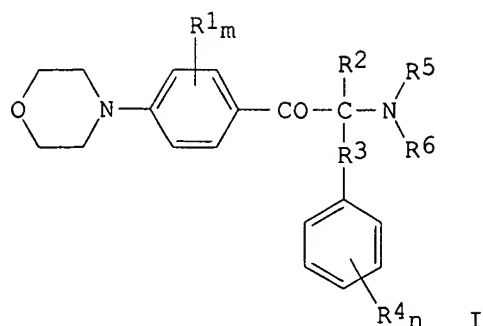
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06016713	A2	19940125	JP 1992-174608	19920702 <--
	JP 3202333	B2	20010827		
PRAI	JP 1992-174608		19920702	<--	
OS	MARPAT 121:58854				
GI					

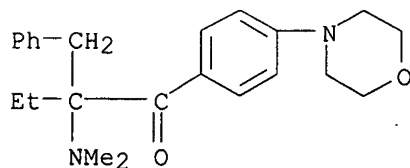


AB The compns. comprise (A) ethylenically unsatd. compds., (B)  $\geq 1$  **photoinitiators** selected from acylphosphine oxides and morpholine derivs. I [R1, R4 = (substituted) alkyl; R2, R5, R6 = H, (substituted) alkyl; R3 = (substituted) alkylene; m = 0-4; n = 0-5], and (C) organic phosphines. Thus, a composition containing Kayarad R 551 100, 2,4,6-trimethylbenzoyldiphenylphosphine oxide 2, and Ph3P 3 parts cured instantly upon irradiation with a fluorescence lamp.

IT **119313-12-1**  
 RL: **CAT (Catalyst use)**; USES (Uses)  
 (catalysts, for visible light-polymerization of acrylic compds.)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
 (9CI) (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 07:09:51 ON 21 NOV 2006)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 07:10:09 ON 21 NOV 2006

L1	1 S	US20040132855/PN OR (US2003-686697# OR WO2003-US32918 OR US20
		E KOHL/AU
		E KOHL P/AU
L2	283 S	E3,E4,E12-E14
		E ALLEN/AU
L3	5 S	E3
		E ALLEN S/AU
L4	114 S	E3,E4
		E ALLEN SUE/AU
L5	29 S	E3-E8
		E BIDSTRUP/AU
L6	49 S	E4-E7
L7	13 S	E17

L8 26 S E19,E20  
     E ALLEN B/AU  
 L9 1 S E74  
     E WU/AU  
 L10 4 S E3  
     E WU X/AU  
 L11 2523 S E3-E30  
 L12 34 S E44  
 L13 161 S E88  
     E WU XIAO/AU  
 L14 54 S E3  
 L15 2 S E80  
     E WU XIAOQ/AU  
 L16 31 S E11  
     E XIAO/AU  
     E XIAO Q/AU  
 L17 43 S E3  
     E XIAO QU/AU  
 L18 4 S E23  
     E XIAOQUN/AU  
 L19 1 S E6  
     E WU NAME/AU  
 L20 48 S E4  
     E XIAO NAME/AU  
     E XIAOQUN NAME/AU  
     E HENDERSON/AU  
 L21 3 S E3  
     E HENDERSON C/AU  
 L22 225 S E3  
 L23 8 S E16  
     E HENDERSON CLIF/AU  
 L24 100 S E4-E7

FILE 'REGISTRY' ENTERED AT 07:16:00 ON 21 NOV 2006

L25 1 S 119313-12-1  
 L26 8 S 119313-12-1/CRN  
 L27 3 S L26 NOT (MXS OR PMS)/CI  
 L28 2 S L27 NOT C10H16O4S  
 L29 3 S L25,L28  
 L30 1 S 162881-26-7  
 L31 3 S 162881-26-7/CRN

FILE 'HCAPLUS' ENTERED AT 07:19:16 ON 21 NOV 2006

L32 839 S L29  
 L33 516 S (IRGACURE OR IRG OR IC OR CGI OR CIBA) ()369  
 L34 41 S 2 BENZYL 2 DIMETHYLAMINO 1 4 MORPHOLINOPHENYL 1 BUTANONE  
 L35 4 S 2 BENZYL 2 DIMETHYLAMINO 1 4 4 MORPHOLINYL PHENYL 1 BUTANONE  
 L36 76 S 2 BENZYL 2 DIMETHYLAMINO 1 4 MORPHOLINOPHENYL BUTANONE  
 L37 30 S 2 BENZYL 2 N N DIMETHYLAMINO 1 4 MORPHOLINOPHENYL 1 BUTANONE  
 L38 2 S ALPHA BENZYL ALPHA DIMETHYLAMINO 4 MORPHOLINO BUTYROPHENONE  
 L39 67 S 2 BENZYL 2 DIMETHYLAMINO 1 4 MORPHOLINOPHENYL BUTAN-1 ONE  
 L40 911 S L32-L39  
 L41 675 S L30  
 L42 14 S PHENYLBIS 2 4 6 TRIMETHYLBENZOYL PHOSPHINE OXIDE  
 L43 4 S PHENYL BIS 2 4 6 TRIMETHYLBENZOYL PHOSPHINE OXIDE  
 L44 138 S BIS 2 4 6 TRIMETHYLBENZOYL PHENYLPHOSPHINE OXIDE  
 L45 6 S BIS 2 4 6 TRIMETHYLBENZOYL PHENYLPHOSPHINEOXIDE  
 L46 544 S CGI 819XF OR CGI 819 XF OR (CIBA OR IRGACURE) ()819 OR IRGACUR  
 L47 4 S BIS 2 4 6 TRIMETHYL BENZOYL PHENYL PHOSPHINE OXIDE  
 L48 17 S BIS 2 4 6 TRIMETHYLBENZOYL PHENYL PHOSPHINE OXIDE

L49 1 S IRGACURE819  
 L50 781 S L41-L49  
 L51 3 S L1-L24 AND L40  
 L52 5 S L1-L24 AND L50  
 L53 5 S L51,L52

FILE 'REGISTRY' ENTERED AT 07:30:27 ON 21 NOV 2006

FILE 'HCAPLUS' ENTERED AT 07:30:38 ON 21 NOV 2006  
 L54 TRA L1 1- RN : 7 TERMS

FILE 'REGISTRY' ENTERED AT 07:30:39 ON 21 NOV 2006  
 L55 7 SEA L54

FILE 'HCAPLUS' ENTERED AT 07:31:22 ON 21 NOV 2006  
 E PHOTOINITIAT/CT  
 E E6+ALL  
 L56 6557 S E2  
 E PHOTODEF/CT  
 L57 40 S L40,L50 AND L56  
 L58 593 S L40,L50 AND ?PHOTOINITIAT?  
 L59 3 S L40,L50 AND ?PHOTODEFIN?  
 L60 7 S L40,L50 AND ?SACRIFIC?  
 L61 359 S L40,L50 AND ?PHOTOSENS?  
 E PHOTOSENS/CT  
 L62 1 S L40,L51 AND E25+OLD,NT  
 E E25+ALL  
 L63 1 S L40,L51 AND E1  
 E E2+ALL  
 L64 1 S L40,L51 AND E3+OLD,NT  
 L65 574 S L40 (L) CAT/RL  
 L66 531 S L50 (L) CAT/RL  
 L67 600 S L65,L66 AND L57-L64  
 E POLYMERIZATION/CT  
 E E3+ALL  
 L68 70 S L67 AND E2+OLD,NT  
 E E19+ALL  
 L69 316 S L67 AND E2+OLD,NT  
 L70 346 S L68,L69  
 E POLYMER DEGRADATION/CT  
 E E3+ALL  
 L71 4 S L70 AND E3  
 L72 0 S L70 AND E10+OLD,NT  
 L73 0 S L70 AND E11+OLD,NT  
 L74 0 S L70 AND E9+OLD,NT  
 L75 9 S L67 AND (E3 OR E10+OLD,NT OR E11+OLD,NT OR E9+OLD,NT)  
 L76 9 S L71,L75  
 L77 4 S L53 AND L67,L70,L76  
 L78 11 S L76,L77  
 L79 6 S L78 NOT COATING?/SC  
 L80 4 S L53 AND L79  
 L81 298 S L67,L70 AND PLASTIC?/SC,SX  
 L82 5 S L81 AND ?SACRIFIC?  
 L83 190 S L81 AND L57-L60  
 L84 298 S L81-L83  
 L85 188 S L84 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)  
 L86 33 S L85 NOT P/DT  
 L87 155 S L85 NOT L86  
 L88 148 S L87 AND (PD<=20021016 OR PRD<=20021016 OR AD<=20021016)  
 SEL DN AN L86 14 20 23

L89 3 S L86 AND E1-E9  
 L90 148 S L88 AND L32,L41  
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 L92 76 S L90 AND L41(L)CAT/RL  
 L93 148 S L91,L92  
     E POLYMERIZATION CATALYSTS/CT  
     E E3\_ALL  
     E POLYMERIZATION CATALYSTS/CT  
     E E3+ALL  
 L94 70 S L93 AND E2  
     E POLYMERIZATION DEGRADATION/CT  
     E POLYMER DEGRADATION/CT  
     E E3+ALL  
 L95 0 S L93 AND E3  
 L96 0 S L93 AND E10  
 L97 0 S L93 AND E11  
 L98 28 S L94 NOT PLASTIC?/SC  
 L99 42 S L94 NOT L98  
 L100 48 S L80,L89,L99  
 L101 48 S L100 AND L1-L24,L32-53,L56-L100  
     SEL HIT RN

FILE 'REGISTRY' ENTERED AT 08:00:35 ON 21 NOV 2006

L102 2 S E1-E2

FILE 'REGISTRY' ENTERED AT 08:00:51 ON 21 NOV 2006

FILE 'HCAPLUS' ENTERED AT 08:00:57 ON 21 NOV 2006

L103 100 S L40 AND L50  
 L104 57 S L103 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)  
 L105 45 S L104 NOT L101

=> => d l129 bib abs hitstr retable tot

L129 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:330927 HCAPLUS

DN 140:347490

TI **Photosensitive** resin compositions with solubility regulation and formation method of double structure patterns

IN Yang, Suk Yoon; No, Su Kwan; Kim, Gil Rai; Park, Chan Suk; Park, Choon Ho

PA Samsung Electronics Co., Ltd., S. Korea; Toshin Semichem

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004126600	A2	<del>20040422</del>	JP 2003-347289	20031006 <--
	KR 2004031137	A	<del>20040413</del>	KR 2002-60500	20021004 <--
	US 2004115558	A1	20040617	US 2003-675455	20030930 <--
	CN 1519592	A	<del>20040811</del>	CN 2003-10124745	<del>20031004</del> <--
PRAI	KR 2002-60500	A	20021004	<--	
AB	Title compns. for color filters comprise (A) aqueous alkali-soluble binders 5-30,				

(B) crosslinkable monomers having  $\geq 2$  ethylenic double bonds 5-30,

(C)  $\geq 1$  **photoinitiator** selected from acetophenone type compds., xanthone type compds., benzoin type compds., and imidazole type compds. 1-5, (D)  $\geq 1$  under part crosslinker selected from silane type polymers and ethylenic monomers having  $\geq 1$  epoxy group or their

oligomers 0.1-2, and (E) solvents 20-80 parts. Thus, a composition comprising styrene-methacrylic acid-Bu methacrylate copolymer 20, dipentaerythritol hexaacrylate 8, C.I. Pigment Red 254 20, C.I. Pigment Yellow 139 10, **Irgacure 369** 1, 4,4'-bisdiethylaminobenzophenone 1, 3-acryloyloxypropyltrimethoxysilane 0.1, propylene glycol Me ether acetate 28, and cyclohexanone 10 parts was applied on a glass plate, dried at 80° for 2 min, a **photomask** was placed thereon, irradiated, and developed with KOH, showing gamma value 1.3.

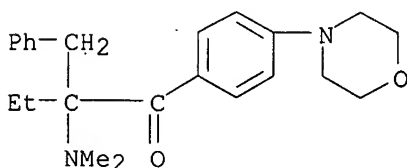
IT 119313-12-1, **Irgacure 369**

RL: **CAT (Catalyst use)**; USES (Uses)

(polymerization initiator; **photosensitive** resin compns. with solubility regulation for color filters)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



L129 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:509956 HCAPLUS

DN 139:70519

TI Photocurable resin composition for coating optical fiber and coated optical fiber and optical fiber unit using the same

IN Takemura, Kiyoshi; Iwamoto, Akihiro; Saitou, Osamu

PA Dainippon Ink and Chemicals, Inc., Japan

SO Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1323784	A1	20030702	EP 2002-28725	20021220 <--
	EP 1323784	B1	20050216		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	JP 2004051936	A2	20040219	JP 2002-329423	20021113 <--
	US 2003138231	A1	20030724	US 2002-326384	20021223 <--
	US 6850682	B2	20050201		
	CN 1428386	A	20030709	CN 2002-157060	20021224 <--
PRAI	JP 2001-393340	A	20011226	<--	
	JP 2002-158411	A	20020531	<--	

OS MARPAT 139:70519

AB A resin composition for coating an **optical** fiber is provided which can be sufficiently cured even in high-speed processing (at a low light **energy** dose) to obtain a cured article having a Young's modulus suitable for use for an **optical** fiber, and also causes neither increase in viscosity nor deposition of solids in storage for a long period or in storage at a high temperature and can be easily coated even after such storage. A coated fiber and an **optical** fiber unit, which use the resin composition are also provided. The composition contains a radical

polymerizable compound (e.g., a urethane acrylate and monomers) (A); a photopolymer. initiator (e.g., 1-hydroxycyclohexylphenylketone) (B); a sulfide (e.g., distearyl-3,3'-thiodipropionate) (C); and a hindered amine [e.g., bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate] (D).

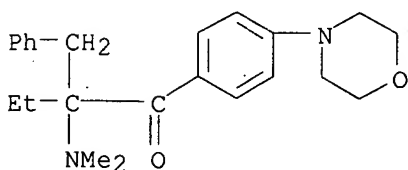
IT 119313-12-1

RL: CAT (Catalyst use); USES (Uses)

(photocurable resin composition for coating optical fiber and coated optical fiber and optical fiber unit using the same)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
(9CI) (CA INDEX NAME)



## RETABLE

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Collins, G	1980			US 4207156 A	HCAPLUS
Kitayama, S	1987			JP 62215663 A	HCAPLUS
Ravve, A	1975			US 3903322 A	HCAPLUS
Sumitomo Electric Ind L	1989			JP 01113711 A	HCAPLUS
Tsurusaki, K	1993			JP 05009242 A	HCAPLUS

L129 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:928112 HCAPLUS

DN 138:9766

TI Roll to roll manufacture of display devices by synchronized  
photolithographic exposure on substrate web

IN Chan-park, Mary; Chen, Xianhai; Wu, Zarnge-Arh George; Wang, Xiaojia; Zang,  
Hong Mei; Liang, Rong Chang

PA Sipix Imaging, Inc., USA

SO U.S. Pat. Appl. Publ., 30 pp., Cont.-in-part of U.S. Ser. No. 759,212.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 26

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002182544	A1	20021205	US 2001-784972	20010215 <--
	US 6933098	B2	20050823		
	US 6930818	B1	20050816	US 2000-518488	20000303 <--
	US 6672921	B1	20040106	US 2000-606654	20000628 <--
	US 2002126249	A1	20020912	US 2001-759212	20010111 <--
	US 6795138	B2	20040921		
	EP 1500970	A1	20050126	EP 2004-25496	20010305 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	CN 1818768	A	20060816	CN 2004-10032752	20010305 <--
	TW 556044	B	20031001	TW 2001-90124906	20011009 <--
	CN 1673833	A	20050928	CN 2005-10068221	20011031 <--
	CN 1371023	A	20020925	CN 2001-139612	20011123 <--

WO 2002065215 A2 20020822 WO 2002-US4967 20020214 <--  
 WO 2002065215 A3 20031009  
 WO 2002065215 C1 20031113

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, US, UZ, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,  
 GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,  
 GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002244078 A1 20020828 AU 2002-244078 20020214 <--  
 US 2003039022 A1 20030227 US 2002-237522 20020906 <--  
 US 6751008 B2 20040615  
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 JP 2004004773 A2 20040108 JP 2003-113086 20030417 <--  
 PRAI US 2000-518488 A2 20000303 <--  
 US 2000-606654 A2 20000628 <--  
 US 2001-759212 A2 20010111 <--  
 US 2001-784972 A 20010215 <--  
 CN 2001-800227 A3 20010305 <--  
 EP 2001-914676 A3 20010305 <--  
 JP 2001-566087 A3 20010305 <--  
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 WO 2002-US4967 W 20020214 <--  
 US 2002-87527 A1 20020228 <--

AB This invention relates to an electrophoretic display or a liquid crystal display and novel processes for its manufacture. The electrophoretic display (EPD) of the present invention comprises microcups of well-defined shape, size and aspect ratio and the microcups are filled with charged pigment particles dispersed in an optically contrasting dielec. solvent. The liquid crystal display (LCD) of this invention comprises well-defined microcups filled with at least a liquid crystal composition having its ordinary refractive

index matched to that of the isotropic cup material. A novel roll-to-roll process and apparatus of the invention permits the display manufacture to be carried

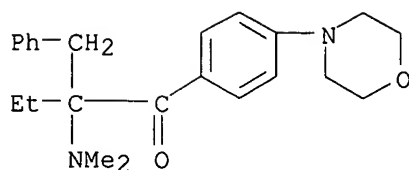
out continuously by a synchronized photolithog. process. The synchronized roll-to-roll process and apparatus permits a pre-patterned **photomask**, formed as a continuous loop, to be rolled in a synchronized motion in close parallel alignment to a web which has been precoated with a radiation sensitive material, so as to maintain image alignment during exposure to a radiation source. The radiation sensitive material may be a radiation curable material, in which the exposed and cured portions form the microcup structure. In an addnl. process step, the radiation sensitive material may be a pos. working photoresist which temporarily seals the microcups. Exposure of a selected subset of the microcups via the **photomask** image permits selective re-opening, filling and sealing of the microcup subset. Repetition with addnl. colors permits the continuous assembly of a multicolor EPD or LCD display.

IT 119313-12-1, Irgacure 369

RL: TEM (Technical or engineered material use); USES (Uses)  
 (roll to roll manufacture of display devices by synchronized photolithog. exposure on substrate web)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



## RETABLE

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Albert	2002			US 6392785 B1	
Albert	2002			US 6392786 B1	
Anon					
Anon	1982			JP 57-104116	HCAPLUS
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Anon	1985			JP 60205452	
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Anon	1990			JP 02-223936	
Anon	1990			JP 02-284125	
Anon	1990			JP 02284126	
Anon	1992			JP 04-113386	
Anon	1994			JP 06-242423	
Anon	1997			JP 09-160052	HCAPLUS
Anon	1997			WO 9704398	HCAPLUS
Anon	1998			WO 9857226	HCAPLUS
Anon	1999			WO 9908151	HCAPLUS
Anon	1999			WO 9953373	HCAPLUS
Anon	1999			WO 9956171	HCAPLUS
Anon	2000			WO 0003291	HCAPLUS
Anon	2000			WO 0036649	HCAPLUS
Anon	2000			WO 0060410	HCAPLUS
Anon	2000			WO 0077571	HCAPLUS
Anon	2000			US 09518488	
Anon	2000			EP 0990942 A1	HCAPLUS
Anon	2000			DE 199273596	
Anon	2000			JP 20-00241648	HCAPLUS
Anon	2000			JP 2000035677	HCAPLUS
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Anon	2001			WO 0167170 A1	HCAPLUS
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Anon	2001			EP 1065553 A1	HCAPLUS
Anon	2001			EP 1089118 A2	HCAPLUS
Anon	2001			JP 2001042118	HCAPLUS
Anon	2001			JP 2001056653	
Anon	2001			CA 2340683	HCAPLUS
Anon	2002			WO 0201281	HCAPLUS
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Jain	1990			US 4924257 A	
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Kaake	1999			US 5967871 A	
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Katoh	2003			US 6514328 B1	HCAPLUS

Kazlas, P	2001			SID 01 Digest 152-15	
Kim	1993			US 5274481 A	HCAPLUS
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Kishi, E	2000		2	SID Digest , 5.1 Dev	
Kobayashi	1999			US 5895541 A	
Kornfeld	1988			US 4741604 A	
Lewis, J			223	Electrophoretic Disp	
Liang	1999			US 5978062 A	HCAPLUS
Liang	2000			US 09606654	
Liang	2002			US 20020075556 A1	HCAPLUS
Liang	2002			US 20020126249 A1	
Liang	2002			US 20020131152 A1	
Liang	2003			US 10372027	
Liang	2003			US 10388890	
Liang	2003			US 10444760	
Liang	2003			US 20030007238 A1	
Liang	2003			US 20030039022 A1	
Liang	2003			US 20030053190 A1	
Liebert	1978			US 4071430 A	HCAPLUS
Matsuda, Y	2002	02	EP2	IDW, Newly designed,	
Micale	1990			US 4891245 A	HCAPLUS
Moore	2001			US 20010009352 A1	
Morita	2002			US 6400492 B1	HCAPLUS
Murau, P	1978	9	4820	J. Appl. Phys	
Nacci	1975			US 3885964 A	HCAPLUS
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Ota	1975			US 3892568 A	HCAPLUS
Ota	1977	18	243	Proc. of SID	
Ota	1973	7		Proceedings of the I	
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Rogers	2002			US 6337761 B1	
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Sakai	2000			US 6113836 A	HCAPLUS
Sanders	1975			US 3908052 A	
Schmidt	2003			US 6512626 B1	HCAPLUS
Schubert	1995			US 5380362 A	HCAPLUS
Schubert	1995			US 5403518 A	HCAPLUS
Singer, B	1977			An X-Y Addressable E	
Slafer, W	1992	1663	324	SPIE Proc., Continuo	
Summersgill	1999			US 5985084 A	
Swanson	2000			SID 00 Digest 29-31,	
Takayama	1997			US 5699097 A	HCAPLUS
Van der Zande	1988			US 4741988 A	HCAPLUS
Yager	2002			US 20020029969 A1	
Yamada	1998			US 5739889 A	HCAPLUS
Zang	2002			US 20020188053 A1	HCAPLUS

L129 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

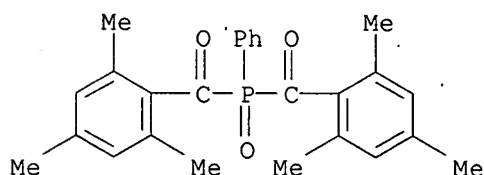
AN 2002:580394 HCAPLUS

DN 137:270326

TI Direct photolithographic deforming of organomodified siloxane films for microoptics fabrication

AU Karkkainen, Ari H. O.; Tamkin, John M.; Rogers, Jeremy D.; Neal, Daniel

R.; Hormi, Osmo E.; Jabbour, Ghassan E.; Rantala, Juha T.; Descour, Michael R.  
 CS VTT Electronics, Oulu, FIN-90571, Finland  
 SO Applied Optics (2002), 41(19), 3988-3998  
 CODEN: APOPAI; ISSN: 0003-6935  
 PB Optical Society of America  
 DT Journal  
 LA English  
 AB Direct photolithog. deforming of hybrid glass films is used to fabricate optical structures. The structure is fabricated in polyethylene oxide-acrylate modified hybrid glass films with (1) binary and **gray-scale photomasks** using a mercury UV-lamp exposure and (2) maskless UV-laser patterning. Fabrication of isolated lenslets, lens arrays, and gratings is presented, including the associated exposure patterns. The hybrid glass material yields light-induced deformation peak-to-valley (p.v.) heights up to 12.8  $\mu\text{m}$  with mercury UV-lamp exposure and p.v. deformation heights up to 6.8  $\mu\text{m}$  with 365-nm UV-laser exposure. The fabricated lenslets' surface data are presented as Zernike-polynomial fit coeffs. Material synthesis and processing-related aspects are examined to understand and control the material's deformation under exposure. The hybrid glass material exhibits a maximum spectral extinction coefficient of  $1.6 + 10^{-3} \mu\text{m}^{-1}$  at wavelengths ranging from 450 to 2200 nm and has a refractive index of 1.52 at 632.8 nm. The fabricated structures exhibit rms surface roughness between 1 and 5 nm.  
 IT 162881-26-7  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (photoinitiator; fabrication of microoptical structures in polyethylene oxide-acrylate modified hybrid siloxane glass films by photolithog. deformation)  
 RN 162881-26-7 HCAPLUS  
 CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



## RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
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Cheben, P	2001	78	1490	Appl Phys Lett	HCAPLUS
Darracq, B	1998	10	1133	Adv Mater	HCAPLUS
Eisner, M	1996	10	2979	Opt Eng	
Fiorini, C	2000	115	121	Synth Met	HCAPLUS
Focus Software Incorpor				<a href="http://www.focus-sof">http://www.focus-sof</a>	
Gratix, E	1993	1992	266	Miniature and Micro-	
Hartmann, D	2001	40	2736	Appl Opt	
Hench, L	1998		63	Sol-Gel Silica:Prope	
Kufner, M	1997			Micro-Optics and Lit	
Lavielle, L	1997	104	213	J Photochem Photobio	HCAPLUS
Lavielle, L	1997	102	245	J Photochem Photobio	HCAPLUS
Nishihara, H	1989			Optical Integrated C	
Noll, R	1976	66	207	J Opt Soc Am	
Ornelas-Rodriquez, M	2001	40	921	Opt Eng	

Pelissier, S	1999	38	6744	Appl Opt	HCAPLUS
Rantala, J	2000	16	530	Electron Lett	
Rantala, J	2001	8	682	Opt Express, http://	HCAPLUS
Rantala, J	1998	23	1939	Opt Lett	HCAPLUS
Sinzinger, S	1999		85	Microoptics	
Sramek, R	2000	277	39	Non-Cryst Solids	HCAPLUS
Suzuki, S	1989			US 4877717	HCAPLUS
Tamkin, J	2000			US 6084706	
Trout, T	1998	10	1219	Adv Mater	HCAPLUS
Yip, K	1989	15	202	J Imaging Sci Techno	HCAPLUS

L129 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:307198 HCAPLUS

DN 137:116871

TI Siloxane-based hybrid glass materials for binary and **gray-scale** mask photoimaging

AU Karkkainen, Ari H. O.; Rantala, Juha T.; Maaninen, Arto; Jabbour, Ghassan E.; Descour, Michael R.

CS VTT Electronics, Oulu, FIN-90570, Finland

SO Advanced Materials (Weinheim, Germany) (2002), 14(7), 535-540

CODEN: ADVMEW; ISSN: 0935-9648

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

AB The fabrication of microoptical and optomech. structures by applying photoimaging of hybrid glass materials is discussed. The optical and optomech. structures are fabricated simultaneously in a single lithog. step. **Gray-scale** and binary **photomasks** have been successfully applied for the fabrication of lens arrays to a maximum lens sag of 102  $\mu\text{m}$  and of optomech. structures to a maximum height of 140  $\mu\text{m}$ . Alignment-aiding optomech. structures can be patterned simultaneously with optical structures in the hybrid glass to fabricate microoptical elements. No chemical or dry etch transfer of the imaged structures is required. The fabricated lenslets and the optomech. structures show high surface and optical quality. The fabricated hybrid glass surfaces can be coated with interference coatings utilizing standard deposition procedures. Photoimaging of hybrid glass materials simplifies the fabrication of the optical components and enables new optics integration options.

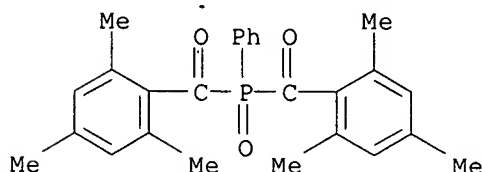
IT 162881-26-7

RL: **CAT (Catalyst use)**; USES (Uses)

(photopolymn. initiator system; photoimaging of siloxane-based neg-tone hybrid glass materials in fabrication of microoptical and optomech. structures)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
=====	=====	=====	=====	=====	=====

Ayraes, P	1999	352	9	Thin Solid Films	
Conrady, A	1960			Applied Optics and O	
Cox, W	2001	12	32	Opt Photon News	HCAPLUS
Dannberg, P	1999	6	41	Microsyst Technol	
Decker, C	1988	189	2381	Makromol Chem	HCAPLUS
Eisner, M	1996	10	2979	Opt Eng	
Fouassier, J	1991	61	47	J Photochem Photobio	HCAPLUS
Fouassier, J	1995			Photoinitiation, Pho	
Gerlach, A	2001	7	27	Microsyst Technol	
Haruvy, Y	1991	3	501	Chem Mater	HCAPLUS
Haruvy, Y	1997	9	2604	Chem Mater	HCAPLUS
Keyworth, B	1996			US 5534101	
Krug, H	1994	18	1125	New J Chem	HCAPLUS
Kupka, R	2000	164	97	Appl Surf Sci	HCAPLUS
Levy, R	1999	3879	167	Proc SPIE-Int Soc Op	
Mohr, J	1998	10	363	Sens Mater	HCAPLUS
Morris, G	1998	3573	370	Proc SPIE-Int Soc Op	HCAPLUS
Noll, R	1976	66	207	J Opt Soc Am	
Rantala, J	2000	16	530	Electron Lett	
Rantala, J	1998	23	1939	Opt Lett	HCAPLUS
Riedl, M	2001	35	130	Photon Spectra	
Schaffer, C	2001	12	20	Opt Photon News	
Seraji, S	2000	12	1421	Adv Mater	HCAPLUS
Shannon, R	1997			The Art and Science	
Shinmou, K	2000	19	267	J Sol-Gel Sci Techno	HCAPLUS
Sinzinger, S	1999			Microoptics	
Yoldas, B	1998	13	147	J Sol-Gel Sci Techno	HCAPLUS

L129 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:305767 HCAPLUS

DN 136:326630

TI Soluble polyimide compositions, **photosensitive** compositions  
containing them, and their use as cover-layer films for flexible printed  
circuit boards

IN Takakawara, Kaoru; Okada, Yoshifumi

PA Kanegafuchi Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002121207	A2	20020423	JP 2000-315946	20001016 <--
	WO 2002032966	A1	20020425	WO 2001-JP9053	20011015 <--
	W: KR, US				
	US 2004048978	A1	20040311	US 2003-399268	20030416 <--
PRAI	JP 2000-315946	A	20001016	<--	
	JP 2000-356492	A	20001122	<--	
	JP 2000-360199	A	20001127	<--	
	JP 2000-400072	A	20001228	<--	
	JP 2001-78201	A	20010319	<--	
	JP 2001-163470	A	20010530	<--	
	WO 2001-JP9053	W	20011015	<--	

AB The cover-layer films are obtained from **photosensitive** compns.  
containing 100 parts soluble polyimides, 1-100 parts compds. having  $\geq 1$   
aromatic ring and  $\geq 2$  double bonds in a mol., and photoreactive  
initiators and/or sensitizers. Thus, 18.3 g 30% soluble polyimide varnish  
[prepared from bis[4-(3-aminophenoxy)phenyl] sulfone (BAPS-M) and  
2,2-bis(4-hydroxyphenyl)propane dibenzoate-3,3',4,4'-tetracarboxylic acid

dianhydride (ESDA); Mw 68,000, Tg 200°] was blended with A 9300 (ethylene oxide-modified isocyanuric acid triacrylate) 4.5, **Irgacure 819** (photopolymerization initiator) 0.1, and 4-methoxyphenyl (polymerization inhibitor) 0.01 g, applied on a PET film, and dried to give a 50- $\mu$ m film, which was laminated on a Cu foil exposed via a **photomask** pattern, heated, developed, and cured to give a patterned film with Tg 290°, modulus of elasticity 400 N/mm<sup>2</sup>, and elongation 2.8%.

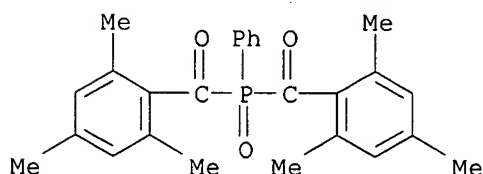
IT 162881-26-7, **Irgacure 819**

RL: **CAT (Catalyst use)**; USES (Uses)

(photopolymerization initiator; **photosensitive** soluble polyimide compns. for cover-lay films for protection of flexible printed circuit boards)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L129 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:485391 HCAPLUS

DN 135:93581

TI Manufacture of protective films with good etchability and color filters containing them

IN Okazaki, Tetsuya; Kobayashi, Yuji; Kimura, Yoichi; Liu, Junlin

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001183521	A2	20010706	JP 1999-371006	19991227 <--
PRAI	JP 1999-371006		19991227 <--		

AB The films are formed on a base plate such as that of color filters by coating with a composition containing (A) polymers having acid number 20-200 mg-KOH/g

and unsatd. group equivalent 200-1000, (B) radical crosslinkers and (C) **photoinitiators**, exposing to light and developing with a mixture of basic compds. and glycol-type surfactants, where the polymers have units derived from styrene-like compound and units derived from maleic acid ester-like compds. which bear  $\geq 1$  photocurable unsatd. ester moieties. Thus, dissolving an A-type polymer (having units derived from styrene and units derived from maleic acid monopropyl ester partially esterified with methacryloyloxy(hydroxyalkyl) group; acid number 65 mg-KOH/g, Mw 11,000), trimethylolpropane triacrylate 40 and **Irgacure 369** (initiator) 2 in propylene glycol monomethyl ether acetate 237 g, coating on a glass surface, drying at 80° for 3 min, exposing to UV light through a **photomask**, developing with a solution containing Pepol B 182 (surfactant) and Ca carbonate and heating in a clean oven gave a patterned film with good resolution, light transmission and pencil hardness 3H.

L129 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2001:417263 HCAPLUS  
 DN 135:38779  
 TI **Photodefinition** of optical devices  
 IN Lackritz, Hilary S.; Bischel, William K.; Kowalczyk, Tony C.; Field, Simon J.; Thoms, Travis P. S.; Lee, Yeong-Cheng  
 PA Gemfire Corporation, USA  
 SO PCT Int. Appl., 91 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001040836	A1	20010607	WO 2000-US32625	20001130 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2389347	AA	20010607	CA 2000-2389347	20001130 <--
	AU 2001019364	A5	20010612	AU 2001-19364	20001130 <--
	EP 1234199	A1	20020828	EP 2000-982314	20001130 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003515782	T2	20030507	JP 2001-542244	20001130 <--
	US 2001031122	A1	20011018	US 2000-728766	20001201 <--
	US 6724968	B2	20040420		
PRAI	US 1999-168572P	P	19991202	<--	
	WO 2000-US32625	W	20001130	<--	

AB Radiation-definable materials comprising a first layer, a second layer above the first layer, and a third layer above the second layer, wherein the first, second and third layers each comprise polymers containing unactivated first **photosensitive** mols. which activate polymerization (e.g., polymerization **photoinitiators**) in response to incident **optical energy** of a first wavelength are described in which the polymer in the second layer further contains a greater concentration by

volume of unactivated second **photosensitive** mols. than does the first and third layers, the second **photosensitive** mols. activating polymerization in response to incident **optical energy** of a second wavelength, the first **photosensitive** mols. being less susceptible to activating polymerization in response to incident **optical energy** of the second wavelength than are the second **photosensitive** mols., and the second **photosensitive** mols. being less susceptible to activating polymerization in response to incident **optical energy** of the first wavelength than are the first **photosensitive** mols. Methods for fabricating **optical** elements are described which entail forming an active layer including a **photodefinable** material on a substrate or on another underlying layer, forming an upper layer above the active layer, and then patterning the active layer by selective application of radiation through the upper layer. The upper layer is substantially transparent to radiation of the type required to activate

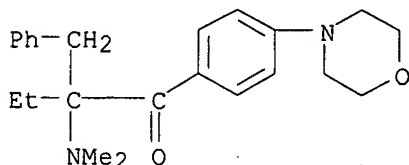
the **photodefinable** material in the active layer. Devices fabricated using the methods are also described.

IT 119313-12-1, **Irgacure 369**

RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses) (**photodefinable** multilayered materials and **photodefinition** of optical devices and the devices)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Akzo Nobel Nv	1995			EP 0689094 A	HCAPLUS
Booth, B	1995			US 5402514 A	HCAPLUS
de Monts, H	1992			US 5159699 A	HCAPLUS
Harris, M	1992			WO 9200185 A	HCAPLUS
Ici Plc	1991			EP 0412675 A	
Joshi, M	1999	74	170	APPLIED PHYSICS LETT	HCAPLUS
Nippon Telegraph & Tele	1994			EP 0616234 A	HCAPLUS
Northern Telecom Ltd	1987			GB 2191603 A	

L129 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:414637 HCAPLUS

DN 135:20669

TI Radiation-curable resin compositions and their use in spacers of liquid-crystal display devices

IN Ogasawara, Shoji; Yamada, Kenji; Endo, Masayuki

PA JSR Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001154206	A2	20010608	JP 1999-333642	19991125 <--
PRAI JP 1999-333642		19991125	<--	

AB The compns. comprise (A) copolymers of unsatd. carboxylic acids or/and anhydrides, unsatd. group-containing epoxy compds. and other unsatd. comonomers, (B) polymers bearing unsatd. groups, (C) radiation polymerization initiators and (D) colorants. Thus, heating styrene 20 with methacrylic acid 16, dicyclopentanyl methacrylate 19,  $\beta$ -methylglycidyl methacrylate 45,  $\alpha$ -methylstyrene dimer 3, AIBN 7, and propylene glycol monomethyl ether acetate 200 parts at 70° for 5 h, and mixing the resulting polymer solution (solids concentration 33.3%) 100 with Kayarad

DPHA 100, **Irgacure 369** (initiator) 25, carbon black 7, Disperbyk 182 (dispersant) 2 and  $\gamma$ -glycidoxypropyltrimethoxysilane 5

parts gave a radiation-curable composition which was spin-coated on a glass surface, dried, photo-mask-patterned with UV light and developed to give a spacer film of 5  $\mu$ m thickness with good light blocking property and resistance to heat and rubbing.

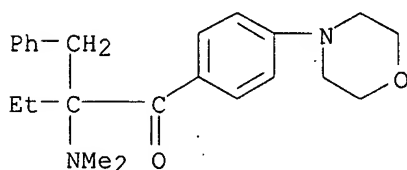
IT 119313-12-1, Irgacure 369

RL: CAT (Catalyst use); USES (Uses)

(polymerization initiator; radiation-curable resin compns. and use in spacers of liquid-crystal display devices)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



L129 ANSWER 10 OF 18 HCAPLUS. COPYRIGHT 2006 ACS on STN

AN 2001:62567 HCAPLUS

DN 134:132600

TI Radiation-curable resin compositions for making color filters

IN Sakurai, Koichi; Watanabe, Takeshi

PA JSR Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001021713	A2	20010126	JP 1999-189882	19990705 <--
PRAI	JP 1999-189882		19990705	<--	
OS	MARPAT 134:132600				

AB The compns. comprise (A) colorants, (B) alkali-soluble resins, (C) polyfunctional monomers, (D) (meth)acrylate esters bearing imidazolyl groups, and (E) **photoinitiators**. Thus, mixing a C.I. Pigment Red 177/C.I. Pigment Red 224 65:35 mixture 100 with a benzyl methacrylate-glycerol monomethacrylate-methacrylic acid-N-phenylmaleimide-styrene copolymer 70, dipentaerythritol hexaacrylate 80, 2-(2'-methylimidazolyl)ethyl methacrylate 10, **2-benzyl -2-dimethylamino-1-(4-morpholinophenyl)-1-butanone** 50 and propylene glycol monomethyl ether acetate 1000 parts; coating the resulting mixture on the surface of a soda glass, pre-baking, irradiating with UV light via a **photomask**, developing in a KOH solution, washing and post baking gave a color filter.

IT 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)-1-butanone

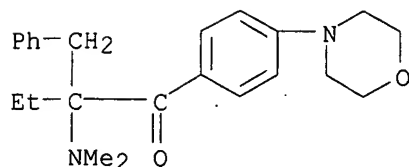
RL: CAT (Catalyst use); USES (Uses)

(photoinitiators; radiation-curable resin compns. for making color filters)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-

(9CI) (CA INDEX NAME)



L129 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:802144 HCAPLUS

DN 133:342297

TI Manufacture of plasma display phosphor panels

IN Sato, Kazuya; Nojiri, Takeshi; Kawakami, Hiroyuki; Shimamura, Mariko; Sugiura, Yumiko; Tai, Seiji

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000315455	A2	20001114	JP 1999-123988	19990430 <--
PRAI	JP 1999-123988		19990430	<--	

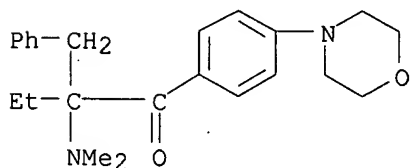
AB The manufacturing process comprises the steps of: forming (1) a 1st **photosensitive** resin layer containing a red phosphor in a substrate having a partitioned wall dividing into a 1st, a 2nd and a 3rd cell array; forming (2) a 2nd **photosensitive** layer containing a fine particle on (1); irradiating a light onto the 1st cell array through a **photomask**; removing (2) and the unexposed red phosphor layer in the 2nd and the 3rd cell array; and repeating the process for the 2nd and the 3rd cell array using a green and a blue phosphor, resp.

IT 119313-12-1

RL: DEV (Device component use); USES (Uses)

(manufacture of plasma display phosphor panels)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
(9CI) (CA INDEX NAME)

L129 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:313476 HCAPLUS

DN 132:322804

TI Radiation-curable resin compositions for color filters with good scratch resistance and adhesion to substrate

IN Nagatsuka, Tomio; Kamii, Hideyuki; Sakai, Takahiro; Watanabe, Takeshi; Sakurai, Koichi

PA JSR Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000131519	A2	20000512	JP 1998-303810	19981026 <--
PRAI	JP 1998-303810		19981026	<--	

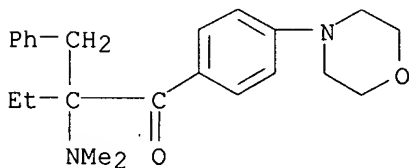
AB The compns. comprise (A) colorants, (B) alkali-soluble polymers of vinylbenzyl (poly)glycidyl ether compds. and comonomers, (C) crosslinkers and (D) **photoinitiators**. Thus, mixing C.I. Pigment Red 177 (pigment) 100 with an alkali-soluble (15:16.5:15:53.5) methacrylic acid-p-vinylbenzyl glycidyl ether-2-hydroxyethyl methacrylate-benzyl methacrylate copolymer (Mw 8000, Mn 4500) 60, dipentaerythritol hexaacrylate 40, 2,2'-bis(2,4-dichlorophenyl)-4,4',5,5'-tetraphenyl-1,2'-biimidazole 10, 4,4'-bis(diethylamino)benzophenone 10, 2-benzyl-2-dimethylamino-1-(4'-morpholinophenyl)butan-1-one 50 and Et 3-ethoxypropionate 1000 parts gave a composition which was spin-coated on a SiO<sub>2</sub>-deposited soda glass surface, dried, irradiated with UV light through a **photomask** and developed in an alkali solution to give a color filter with good scratch resistance and adhesion.

IT 119313-12-1

RL: **CAT (Catalyst use)**; USES (Uses)  
 (photoinitiator; radiation-curable resin compns. for color filters with good scratch resistance and adhesion to substrate)

RN. 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
 (9CI) (CA INDEX NAME)



L129 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:223646 HCAPLUS

DN 132:252179

TI Highly-sensitive radiation-curable resin compositions for color filters

IN Iijima, Takahiro; Ito, Yukiko; Sakurai, Koichi; Nemoto, Hiroaki

PA JSR Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000098124	A2	20000407	JP 1998-269115	19980924 <--
PRAI	JP 1998-269115		19980924	<--	

AB The compns. can be cured so completely and cleanly that no residue and soiling will be left on a processing support, are obtained from (A) colorants, (B) alkali-soluble resins, (C) polyfunctional monomers, (D)

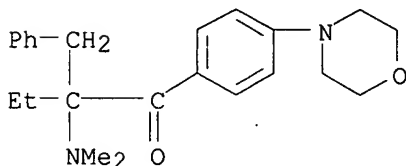
photoinitiators and (E) amine compds. having mol. weight <1000. Thus, mixing a 60:40 mixture of C.I. Pigment Green 36 and C.I. Pigment Yellow 150, 110, with a methacrylic acid-styrene-benzyl methacrylate-glycerol monomethacrylate-N-phenylmaleimide copolymer 50, dipentaerythritol hexaacrylate 50, 2,2'-bis(2,4-dichlorophenyl)-4,4',5,5'-tetraphenyl-1,2'-biimidazole 5 and 4,4'-bis(diethylamino)benzophenone 5 and 2-benzyl-2-dimethylamino-1-(4-morpholinophenyl)butan-1-one 50, 2-aminoethanol 5 and a 90:10 mixture of Et 3-ethoxypropionate and cyclohexanone, 1000 parts, coating the resulting mixture on a Cr plate, heating at 100° for 2.5 min, cooling, irradiating with a high-pressure Hg lamp via a photo-mask, developing in a NaOH solution, washing and post baking gave a color filter without soiling the support plate.

IT 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)butan-1-one

RL: CAT (Catalyst use); USES (Uses)  
(photoinitiator; highly-sensitive radiation-curable resin compns. for color filters)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



L129 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:123511 HCAPLUS

DN 132:258045

TI Patterning curved surfaces: Template generation by ion beam proximity lithography and relief transfer by step and flash imprint lithography

AU Ruchhoeft, P.; Colburn, M.; Choi, B.; Nounu, H.; Johnson, S.; Bailey, T.; Darmle, S.; Stewart, M.; Ekerdt, J.; Sreenivasan, S. V.; Wolfe, J. C.; Willson, C. G.

CS Department of Electrical and Computer Engineering, University of Houston, Houston, TX, 77204, USA

SO Journal of Vacuum Science & Technology, B: Microelectronics and Nanometer Structures (1999), 17(6), 2965-2969

CODEN: JVTBD9; ISSN: 0734-211X

PB American Institute of Physics

DT Journal

LA English

AB Submicron patterning of 1 in. diameter curved surfaces with a 46 mm radius of curvature has been demonstrated with step and flash imprint lithog. (SFIL) using templates patterned by ion beam proximity printing (IBP). Concave and convex spherical quartz templates were coated with 700-nm-thick PMMA and patterned by step-and-repeat IBP. The developed resist features were etched into the quartz template and the remaining PMMA stripped. During SFIL, a low viscosity, photopolymerizable formulation containing organosilicon precursors was introduced into the gap between the etched template and a substrate coated with an organic transfer layer and exposed to UV illumination. The smallest features on the templates were faithfully

replicated in the silylated layer.

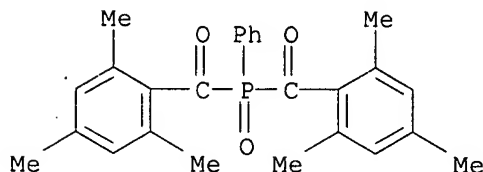
IT 162881-26-7, Irgacure 819

RL: NUU (Other use, unclassified); USES (Uses)

(initiator; submicron patterning of 1 in. diameter curved surfaces with 46 mm radius of curvature by step and flash imprint lithog. using templates generated by ion-beam lithog. and photopolymer. layer between template and substrate)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Chou, S	1996	14	4129	J Vac Sci Technol B	HCAPLUS
Colburn, M	1999			SPIE's 24th Internat	
Haisma, J	1996	14	4124	J Vac Sci Technol B	HCAPLUS
Hamilton, W	1999			Internal Report DARP	
Johnson, S	1999			MS thesis, The Unive	
Pendarkar, S	1995	13	2588	J Vac Sci Technol B	
Scheer, H	1998	16	3917	J Vac Sci Technol B	HCAPLUS
Smith, S	1992			Foundations of Ultra	
Stumbo, D	1991	9	3597	J Vac Sci Technol B	HCAPLUS
Wolfe, J	1996	14	3896	J Vac Sci Technol B	HCAPLUS
Xia, Y	1998	37	550	Angew Chem Int Ed En	HCAPLUS
Ziegler, J	1985			Updated software (ve	

L129 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:590554 HCAPLUS

DN 132:7354

TI Multilevel structures in sol-gel thin films with a single UV-exposure using a **gray-scale** mask

AU Ayra, P.; Rantala, J. T.; Levy, R.; Descour, M. R.; Honkanen, S.; Peyghambarian, N.

CS Optical Sciences Center, University of Arizona, Tucson, AZ, USA

SO Thin Solid Films (1999), 352(1,2), 9-12

CODEN: THSFAP; ISSN: 0040-6090

PB Elsevier Science S.A.

DT Journal

LA English

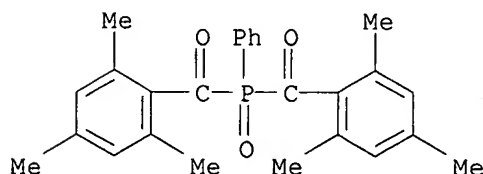
AB Multilevel structures in sol-gel thin films with a single step process are demonstrated. A neg.-tone hybrid sol-gel material is UV-exposed through a **gray-scale** calibration mask. Test strips of different depths and a continuous test **profile** are demonstrated. A maximum depth difference exceeding 1.5 µm is obtained, which permits the fabrication of multilevel diffractive elements for use in visible light. This method of using sol-gel material with a **gray-scale** mask has the potential for low-cost fabrication of complex multilevel micro-optical structures.

IT 162881-26-7, Bis(2,4,6-trimethylbenzoyl)-phenylphosphine oxide

RL: NUU (Other use, unclassified); USES (Uses)  
 (photoinitiator; multilevel structures in sol-gel thin films  
 with a single UV-exposure using a **gray-scale** mask)

RN 162881-26-7 HCAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Albert, J	1995	31	222	Electron Lett	
Andersson, H	1990	29	4259	Appl Opt	
Anon	1997			Micro-optics: Elemen	
Anon	1997	CR68		Sol-Gel and Polymer	
Brinker, C	1990			Sol-Gel Science: The	
Daschner, W	1997	36	4675	Appl Opt	
Hessler, T	1998	37	4069	Appl Opt	
Moreau, Y	1998	37	1130	Opt Eng	

L129 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:344646 HCAPLUS

DN 131:11618

TI Production of division wall for plasma display panel

IN Horiuchi, Takeshi; Masaki, Takashige; Kusano, Kazutaka

PA Toray Industries, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11149862	A2	19990602	JP 1997-315185	19971117 <--
PRAI	JP 1997-315185		19971117	<--	

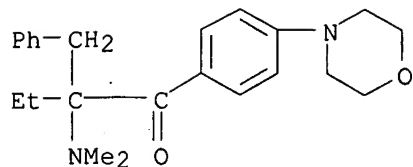
AB A method for the production of a division wall for a plasma display panel comprises the steps of providing two different **photosensitive** compns. comprising organic compds. and inorg. fine particles, coating the **photosensitive** compns. as a laminate on a glass substrate, drying, imagewise exposing through a **photomask**, developing, and sintering, wherein the **photosensitivity** of the top **photosensitive** layer is lower than that of the bottom **photosensitive** layer.

IT 119313-12-1, Irgacure 369

RL: TEM (Technical or engineered material use); USES (Uses)  
 (two-layered **photosensitive** compns. for forming division  
 walls for plasma display panel fabrication containing)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  
 (9CI) (CA INDEX NAME)



L129 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:568861 HCAPLUS

DN 127:249134

TI Active **energy** ray-curable adhesive compositions for optical disks

IN Okawa, Kazuo; Hiratsuka, Ichiro

PA Asahi Denka Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09221651	A2	19970826	JP 1996-54131	19960216 <--
PRAI	JP 1996-54131		19960216 <--		

AB Title comps. comprise (1) polythiols, (2) polyenes having  $\geq 2$  C:C double bonds reactive to energy rays, and (3) energy ray-sensitive radical polymerization initiators, and optionally (4) antioxidants and/or (5) energy ray-polymerization sensitizers. Thus, glycerin 1,3-diallyl ether 20.53, triallyl

isocyanurate 20.53, pentaerythritol tetrakis( $\beta$ -mercaptopropionate) 58.94, and 2-benzyl-2-dimethylamino-1-(4-morpholinophenyl)butane-1-one 1.0 parts were mixed, used for bonding of an Al-coated polycarbonate disk to an Al-noncoated disk, and cured by irradiation with 500-mJ/cm<sup>2</sup> active energy ray to give a test piece showing good adhesion.

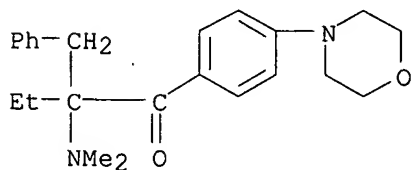
IT 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)butane-1-one

RL: CAT (Catalyst use); USES (Uses)

(active **energy** ray-curable polythiol-polyene adhesive comps. for optical disks)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



L129 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:835575 HCAPLUS

DN 123:242010

TI Process for making array of tapered photopolymerized waveguides

IN Beeson, Karl Wayne; Zimmerman, Scott Moore; Ferm, Paul Michael; McFarland, Michael James

PA Alliedsignal Inc., USA  
 SO PCT Int. Appl., 57 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

*negative*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9513567	A1	19950518	WO 1994-US11913	19941018 <--
	W: AU, CA, CN, FI, JP, KR				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2174851	AA	19950518	CA 1994-2174851	19941018 <--
	AU 9510403	A1	19950529	AU 1995-10403	19941018 <--
	EP 728327	A1	19960828	EP 1995-901008	19941018 <--
	EP 728327	B1	20010321		
	R: DE, FR, GB, IT, NL				
	CN 1141088	A	19970122	CN 1994-194800	19941018 <--
	JP 09500981	T2	19970128	JP 1994-513841	19941018 <--
	JP 2704047	B2	19980126		
PRAI	US 1993-148794	A	19931108	<--	
	WO 1994-US11913	W	19941018	<--	

AB The present invention is directed to a process for making an array of tapered photopolymer waveguides. The tapered waveguides are useful as a display means in direct view devices and projection display devices. In step (a), a **photomask** is placed in substantial contact with a substrate wherein the **photomask** has opaque and transparent regions. In step (b), a substantially uniform thickness of a photopolymerizable mixture is placed on the substrate so that the substrate is positioned between the photopolymerizable mixture and the **photomask** wherein (i) the photopolymerizable mixture comprises at least one reactive monomer and **photoinitiator** and (ii) the **photoinitiator** is present in an amount sufficient to form a gradient of substantially collimated actinic radiation across the thickness of the photopolymerizable mixture during the subsequent step (c). In the step (c), while maintaining the photopolymerizable mixture and substrate in a substantially fixed plane relative to the substantially collimated actinic radiation, the photopolymerizable mixture is exposed through the transparent regions of the **photomask** to the substantially collimated actinic radiation for a time sufficient to form an array of tapered photopolymer waveguides wherein (i) the tapered end of each of the waveguides extends outward from the substrate, (ii) each of the waveguides has a light input surface adjacent the substrate and a light output surface distal from the light input surface, and (iii) the area of the light input surface of each of the waveguides is greater than the area of its light output surface. In step (d), the **photomask** and photopolymerizable mixture which has not substantially polymerized by the substantially collimated actinic radiation during step (c) are removed from the substrate.

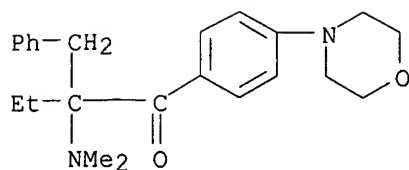
IT 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)-1-butanone

RL: TEM (Technical or engineered material use); USES (Uses)

(photopolymerizable compns. for tapered waveguide array production containing acrylates and)

RN 119313-12-1 HCAPLUS

CN 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-(9CI) (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 07:09:51 ON 21 NOV 2006)  
SET COST OFF

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L1	1	S	US20040132855/PN OR (US2003-686697# OR WO2003-US32918 OR US20
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L2	283	S	E3,E4,E12-E14
		E	ALLEN/AU
L3	5	S	E3
		E	ALLEN S/AU
L4	114	S	E3,E4
		E	ALLEN SUE/AU
L5	29	S	E3-E8
		E	BIDSTRUP/AU
L6	49	S	E4-E7
L7	13	S	E17
L8	26	S	E19,E20
		E	ALLEN B/AU
L9	1	S	E74
		E	WU/AU
L10	4	S	E3
		E	WU X/AU
L11	2523	S	E3-E30
L12	34	S	E44
L13	161	S	E88
		E	WU XIAO/AU
L14	54	S	E3
L15	2	S	E80
		E	WU XIAOQ/AU
L16	31	S	E11
		E	XIAO/AU
		E	XIAO Q/AU
L17	43	S	E3
		E	XIAO QU/AU
L18	4	S	E23
		E	XIAOQUN/AU
L19	1	S	E6
		E	WU NAME/AU
L20	48	S	E4
		E	XIAO NAME/AU
		E	XIAOQUN NAME/AU
		E	HENDERSON/AU
L21	3	S	E3
		E	HENDERSON C/AU
L22	225	S	E3
L23	8	S	E16

L24 E HENDERSON CLIF/AU  
100 S E4-E7

FILE 'REGISTRY' ENTERED AT 07:16:00 ON 21 NOV 2006

L25 1 S 119313-12-1  
L26 8 S 119313-12-1/CRN  
L27 3 S L26 NOT (MXS OR PMS)/CI  
L28 2 S L27 NOT C10H16O4S  
L29 3 S L25,L28  
L30 1 S 162881-26-7  
L31 3 S 162881-26-7/CRN

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L32 839 S L29  
L33 516 S (IRGACURE OR IRG OR IC OR CGI OR CIBA)()369  
L34 41 S 2 BENZYL 2 DIMETHYLAMINO 1 4 MORPHOLINOPHENYL 1 BUTANONE  
L35 4 S 2 BENZYL 2 DIMETHYLAMINO 1 4 4 MORPHOLINYL PHENYL 1 BUTANONE  
L36 76 S 2 BENZYL 2 DIMETHYLAMINO 1 4 MORPHOLINOPHENYL BUTANONE  
L37 30 S 2 BENZYL 2 N N DIMETHYLAMINO 1 4 MORPHOLINOPHENYL 1 BUTANONE  
L38 2 S ALPHA BENZYL ALPHA DIMETHYLAMINO 4 MORPHOLINOBTYROPHENONE  
L39 67 S 2 BENZYL 2 DIMETHYLAMINO 1 4 MORPHOLINOPHENYL BUTAN-1 ONE  
L40 911 S L32-L39  
L41 675 S L30  
L42 14 S PHENYLBIS 2 4 6 TRIMETHYLBENZOYL PHOSPHINE OXIDE  
L43 4 S PHENYL BIS 2 4 6 TRIMETHYLBENZOYL PHOSPHINE OXIDE  
L44 138 S BIS 2 4 6 TRIMETHYLBENZOYL PHENYLPHOSPHINE OXIDE  
L45 6 S BIS 2 4 6 TRIMETHYLBENZOYL PHENYLPHOSPHINEOXIDE  
L46 544 S CGI 819XF OR CGI 819 XF OR (CIBA OR IRGACURE)()819 OR IRGACUR  
L47 4 S BIS 2 4 6 TRIMETHYL BENZOYL PHENYL PHOSPHINE OXIDE  
L48 17 S BIS 2 4 6 TRIMETHYLBENZOYL PHENYL PHOSPHINE OXIDE  
L49 1 S IRGACURE819  
L50 781 S L41-L49  
L51 3 S L1-L24 AND L40  
L52 5 S L1-L24 AND L50  
L53 5 S L51,L52

FILE 'REGISTRY' ENTERED AT 07:30:27 ON 21 NOV 2006

FILE 'HCAPLUS' ENTERED AT 07:30:38 ON 21 NOV 2006

L54 TRA L1 1- RN': 7 TERMS

FILE 'REGISTRY' ENTERED AT 07:30:39 ON 21 NOV 2006

L55 7 SEA L54

FILE 'HCAPLUS' ENTERED AT 07:31:22 ON 21 NOV 2006

E PHOTOINITIAT/CT  
E E6+ALL  
L56 6557 S E2  
E PHOTODEF/CT  
L57 40 S L40,L50 AND L56  
L58 593 S L40,L50 AND ?PHOTOINITIAT?  
L59 3 S L40,L50 AND ?PHOTODEFIN?  
L60 7 S L40,L50 AND ?SACRIFIC?  
L61 359 S L40,L50 AND ?PHOTOSENS?  
E PHOTOSENS/CT  
L62 1 S L40,L51 AND E25+OLD,NT  
E E25+ALL  
L63 1 S L40,L51 AND E1  
E E2+ALL  
L64 1 S L40,L51 AND E3+OLD,NT

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L65      574 S L40 (L) CAT/RL
L66      531 S L50 (L) CAT/RL
L67      600 S L65,L66 AND L57-L64
          E POLYMERIZATION/CT
          E E3+ALL
L68      70 S L67 AND E2+OLD,NT
          E E19+ALL
L69      316 S L67 AND E2+OLD,NT
L70      346 S L68,L69
          E POLYMER DEGRADATION/CT
          E E3+ALL
L71      4 S L70 AND E3
L72      0 S L70 AND E10+OLD,NT
L73      0 S L70 AND E11+OLD,NT
L74      0 S L70 AND E9+OLD,NT
L75      9 S L67 AND (E3 OR E10+OLD,NT OR E11+OLD,NT OR E9+OLD,NT)
L76      9 S L71,L75
L77      4 S L53 AND L67,L70,L76
L78      11 S L76,L77
L79      6 S L78 NOT COATING?/SC
L80      4 S L53 AND L79
L81      298 S L67,L70 AND PLASTIC?/SC,SX
L82      5 S L81 AND ?SACRIFIC?
L83      190 S L81 AND L57-L60
L84      298 S L81-L83
L85      188 S L84 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)
L86      33 S L85 NOT P/DT
L87      155 S L85 NOT L86
L88      148 S L87 AND (PD<=20021016 OR PRD<=20021016 OR AD<=20021016)
          SEL DN AN L86 14 20 23
L89      3 S L86 AND E1-E9
L90      148 S L88 AND L32,L41
L91      86 S L90 AND L32(L)CAT/RL
L92      76 S L90 AND L41(L)CAT/RL
L93      148 S L91,L92
          E POLYMERIZATION CATALYSTS/CT
          E E3_ALL
          E POLYMERIZATION CATALYSTS/CT
          E E3+ALL
L94      70 S L93 AND E2
          E POLYMERIZATION DEGRADATION/CT
          E POLYMER DEGRADATION/CT
          E E3+ALL
L95      0 S L93 AND E3
L96      0 S L93 AND E10
L97      0 S L93 AND E11
L98      28 S L94 NOT PLASTIC?/SC
L99      42 S L94 NOT L98
L100     48 S L80,L89,L99
L101     48 S L100 AND L1-L24,L32-53,L56-L100
          SEL HIT RN

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FILE 'REGISTRY' ENTERED AT 08:00:35 ON 21 NOV 2006

L102 2 S E1-E2

FILE 'REGISTRY' ENTERED AT 08:00:51 ON 21 NOV 2006

FILE 'HCAPLUS' ENTERED AT 08:00:57 ON 21 NOV 2006

L103 100 S L40 AND L50

L104 57 S L103 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)

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L110      5 S L107 AND E1,E2
           E E2+ALL
L111      5 S L107 AND E7+OLD,NT
L112      0 S L107 AND OPTIC?(L)DENSITY(L)PROFILE
L113      3 S L107 AND OPTIC?(L)PROFILE
L114      4 S L107 AND (GRAY OR GREY)(L)SCALE
L115      4 S L107 AND OPTIC?(L)ENERG?
L116     21 S L108-L115
L117     19 S L116 NOT L101
L118      5 S L117 AND L67
L119      1 S L117 AND L70
L120      9 S L117 AND L65,L66
L121      9 S L118-L120
L122     10 S L117 NOT L121
L123      9 S L122 NOT 138:15891/DN
L124     18 S L121,L123
L125     18 S L124 AND L1-L24,L32-53,L56-L101,L103-L124
L126      4 S L125 NOT P/DT
L127     14 S L125 NOT L126
L128     14 S L127 AND (PD<=20021016 OR PRD<=20021016 OR AD<=20021016)
L129     18 S L126,L128

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